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Bulletin 817

BOUNDARIES, AREAS, GEOGRAPHIC CENTERS AND ALTITUDES OF THE UNITED STATES AND THE SEVERAL STATES

WITH A BRIEF RECORD OF IMPORTANT CHANGES IN THEIR TERRITORY AND GOVERNMENT

BY
EDWARD M. DOUGLAS

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SECOND EDITION

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FOREWORD

The first United States Geological Survey record setting forth the
istory of the boundaries of the United States and the several States
nd Territories was prepared by Henry Gannett, assisted by Frank-
n G. Butterfield, and was published as Bulletin 13 of the Geological
urvey in 1885. The second edition, revised and enlarged by Henry
annett, was published as Bulletin 171 in 1900. The third edition,
lso revised by Henry Gannett, was published as Bulletin 226 in 1904.
reprint of this edition with minor corrections was issued in 1906.
revision and enlargement of Bulletin 226 which included addi-
ional matter incidentally connected with boundaries was prepared
y Edward M. Douglas and issued in 1923 as Bulletin 689. The
resent bulletin is a revision and enlargement of the 1923 edition.

It is the desire of the Geological Survey to make this publication a
omplete record, and therefore suggestions for the addition of any
ermane material will be welcomed.

MOUNT McKINLEY, ALASKA

The highest peak in North America; altitude 20,300 feet.

BOUNDARIES, AREAS, GEOGRAPHIC CENTERS, AND ALTITUDES OF THE UNITED STATES AND THE SEVERAL STATES

WITH A BRIEF RECORD OF IMPORTANT CHANGES IN THEIR TERRITORY AND GOVERNMENT

By Edward M. Douglas

HOW BOUNDARIES ARE ESTABLISHED AND CHANGED

Boundaries between countries are established by treaties made by the sovereign powers concerned.[1]

A boundary between two States of the United States may be changed by agreement of the State legislatures, but this agreement must be approved by Congress. The United States Congress can not change a State boundary without the consent of the State, nor can two States by mutual agreement change their common boundary without the consent of Congress. The consent of Congress to a change in a boundary need not be granted by a special act but may be inferred from subsequent legislation.[2] Several times Congress has given its consent in advance for adjoining States to fix an indefinite water boundary between them.[3]

A boundary between a State and a Territory is fixed by joint action of Congress and the State. Boundaries between Territories are fixed by congressional action alone. Disputes between States regarding boundaries must be settled by the United States Supreme Court, whose decisions are final.[4]

---

[1] See Brigham, A. P., Principles in the determination of boundaries: Geog. Rev., vol. 7, pp. 201–219, 1919.

[2] U. S. Supreme Court Repts., 11 Wallace, pp. 39–59 (78 U. S. 39–59); 148 U. S. 502 et al. (Prior to 1875 the volumes of the United States Supreme Court reports were designated by the name of the official reporter and a number. Some sets of these early reports are now numbered serially also. In order of issue there are 4 reports by Dallas (serial Nos. 1–4), covering the years 1790 to 1800; 9 by Cranch (serial Nos. 5–13), 1801 to 1815; 12 by Wheaton (serial Nos. 14–25), 1816 to 1827; 16 by Peters (serial Nos. 26–41), 1828 to 1842; 24 by Howard (serial Nos. 42–65), 1843 to 1860; 2 by Black (serial Nos. 66–67), 1861 to 1862; and 23 by Wallace (serial Nos. 68–90), 1863 to 1874. Beginning with No. 91, for 1875, the volumes have been numbered serially only. References to these reports are customarily made thus: "6 Cranch 24," "10 Howard 40." The serial number of the volume is sometimes given also. Beginning with volume 91, he references are given in the form "97 U. S. 271," meaning volume 97 of the United States Supreme Court reports, p. 271, the page number always being given last.)

[3] 35 Stat. L. 1160–1161; 36 Stat. L. 881; see also 41 Stat. L. 1447. (References in his volume to acts of Congress, joint resolutions, and presidential proclamations, conained in the United States Statutes at Large, are given in the form here used; "36 Stat. L. 881," for example, means volume 36, p. 881.) See Article IV, sec. 3, of the Constituion of the United States. The conditions under which ratification by Congress is ssential are described at length in 148 U. S. 520–522. See also an excellent review of his question in the opinion, dated June 17, 1929, rendered by the attorney general of Texas to a joint legislative committee of that State, regarding the 100th meridian oundary.

It is a well-established principle, recognized by the courts and by Congress, that a State or national boundary line as marked on the ground and accepted by the parties interested is the legal boundary for all purposes, whether or not it is the place designated by statute.[5]

Long acquiescence in the possession of territory and in the exercise of dominion and sovereignty over it is conclusive of the Nation's title and rightful authority.[6] (See p. 130.)

The statute of limitations in the possession of land does not operate against the United States or a State, and title to Government land can not be acquired by adverse possession.[7]

When original boundary marks have been destroyed,

> the law as well as common sense must declare that a supposed boundary line long acquiesced in is better evidence of where the real line should be than any survey made after the original monuments have disappeared.[8]

If by treaty or statute a nonnavigable river or smaller stream is named as a boundary between States or nations and neither the bank nor the main channel is specified, the line midway between the two banks is the actual boundary. A treaty, statute, or cession may specify that one bank or the other is the boundary; in that case either the high water or the low-water mark may be the line, according to the wording of the agreement. For example, the north boundary of Kentucky is the low-water mark on the north bank of the Ohio (see p. 186), as fixed by the act of cession by Virginia, but the high-water mark on the west bank of the Chattahoochee River forms part of the west boundary of Georgia.[9]

If a boundary line described as following the middle of a river intersects an island, it is the usual policy to give the entire island to the State or Government to which the greater part would fall. This rule was followed by the commission acting under Article VI of the treaty of Ghent in fixing the St. Lawrence River boundary, also by the Rhode Island and Massachusetts commissions.[10]

> No land can be considered an island unless it is surrounded by water at all times. The same tract of land can not be sometimes in Kentucky and sometimes

---

[4] 148 U. S. 503.

[5] 148 U. S. 503.

[6] 136 U. S. 510; 202 U. S. 1; 270 U. S. 295.

[7] 39 Fed. 654; 95 Pacific 278. See Act of Dec. 22, 1928, Public No. 645, 70th Cong., for conditions under which a patent may be obtained to United States land held for 20 years under "color of title."

[8] Stewart v. Carleton, 31 Mich. Repts. 270; Diehl v. Zanger, 39 Mich. Repts. 601.

[9] 13 Howard 380.

[10] For reference to the use of the water of rivers that cross State lines, abstract of laws, and bibliography of 70 entries relating to that subject, see Hinderlider, M. C., and Meeker, R. I., Soc. Civil Eng. Trans., vol. 90, pp. 1035–1051, 1927. See also 206 U. S. 46; 259 U. S. 419.

in Indiana, according to the rise and fall of the river. It must be always in the one State or the other.[11]

Where running streams are the boundaries between States, * * * when the bed and channel are changed by the natural and gradual processes known as erosion and accretion, the boundary follows the varying course of the stream [see 265 U. S. 499]; while if the stream from any cause, natural or artificial, suddenly leaves its old bed and forms a new one, by the process known as avulsion, the resulting change of channel works no change of boundary, which remains in the middle of the old channel [or on one bank if so fixed by statute], although no water may be flowing in it.[12]

So long as that channel [as it was previous to avulsion] remains a running stream the boundary marked by it is still subject to be changed by erosion and accretion: but when the water becomes stagnant * * * the boundary then becomes fixed in the middle of the channel.[13]

Thus it may happen that a line described by statute or treaty as a river boundary later runs across dry land, where it remains fixed unless the river returns to its former channel and changes it by slow action. There are many illustrations of this rule in the United States—for example, along the Rio Grande below El Paso, along the Missouri River between Missouri and Kansas and between Missouri and Nebraska, and on the Mississippi between Tennessee and Arkansas.[14]

If after an avulsion the boundary is again moved by new accretions, a Supreme Court rule[15] requires that the boundary be so placed that each State (or individual) shall have a water frontage proportional to what it was immediately after the avulsion occurred, general directions only being considered.[16]

When a navigable river constitutes the boundary between two independent States, the line defining the point at which the jurisdiction of the two separates is well established to be the middle of the main channel of the stream.[17] * * * The controlling consideration which fixes the jurisdiction between neighboring States bordering on a navigable stream "is that which preserves to each State equality in the right of navigation in the river."[18]

---

[11] 5 Wheaton 374. See decision regarding Wolf Island, Mississippi River, 11 Wallace 395.

[12] 246 U. S. 173.

[13] 246 U. S. 175.

[14] See Geological Survey maps of the Nemaha quadrangle (Mo.-Nebr.), Fort Leavenworth quadrangle (Mo.-Kans.), El Paso quadrangle (Tex.), etc. See also maps in Elimination of bancos, treaty of 1905; International Boundary Comm., United States and Mexico, Proc., 2d ser., Nos. 59 and 89, U. S. Dept. State, 1912.

[15] 18 Howard 150; 1 Black 209. See also 48 Mich. 88.

[16] Many examples of the application of this rule are shown on the maps accompanying the reports of the commissioners who established the boundary between Oklahoma and Texas along the Red River. See report No. 4, Jan. 31, 1927, Supreme Court of the U. S., original No. 6, October term, 1926.

[17] This general rule has no application to a case governed by convention or by a special right based on prior possession. (See 202 U. S. 29.)

[18] 143 U. S. 359–367; 147 U. S. 7–13; 202 U. S. 149; 211 U. S. 127–134; 214 U. S. 205, 215; 246 U. S. 158; 247 U. S. 461; 250 U. S. 39; 252 U. S. 282; 259 U. S. 572. Convention with Mexico, Nov. 12, 1884, Art. I. See Opinions of the Attorney General, vol. 8, pp. 175–180, for many references to these rules in international law.

The rule as to what constitutes a navigable stream or lake was reaffirmed in a decision by the United States Supreme Court[19] dated February 1, 1926, as follows:

> Streams or lakes * * * are navigable * * * when they are used or susceptible of being used in their natural or ordinary condition as highways for commerce * * * whether by steamboats, sailing vessels, or flat boats.

At common law only arms of the sea and streams where the tide ebbs and flows are deemed navigable.[20]

The terms "thalweg," "fairway," "midway," or "main channel" are used in the definition of water boundaries between States, meaning the middle or deepest or best navigable channel. They are applied to water boundaries in sounds, bays, straits, gulfs, estuaries, and other arms of the sea, also to boundary lakes and land-locked seas in which there is a deep-water sailing channel.

> The middle of the channel refers to the space within which ships can and usually do pass. This may be and often is midway between the two banks. It is not necessarily the deepest channel, which may be so crooked that it can not be used.[21]
>
> The true water boundary lines for Mississippi River States are lines along the middle of the main channel of navigation as it existed in 1783, subject to such changes as have occurred since that time through natural and gradual processes.[22]
>
> For States bordering on the Mississippi the terms "middle of the Mississippi River," "middle of the main channel of the Mississippi River," "the center of the main channel of that river" are synonymous.[23]

Changes in rivers caused by the works of man do not change boundaries.

> The building of docks or other structures in a river does not work an alteration in a boundary line, nor does it affect the sovereignty of the State over the area occupied by such structures.[24]
>
> He who owns submerged land owns the land reclaimed.[25]
>
> Each State may establish rules of property over land which emerges on either side of an interstate boundary stream, but such rules extend to the interstate boundary line only.[26]

In a case before the United States Supreme Court regarding title to land along a tidal stream in a newly created State it was decided[27] that the shores of navigable rivers and the soil under them up to high-water mark belong to the adjoining State, not to the United States, but this general rule may be modified by treaty, by statute, or by agreement between States when approved by Congress.[28]

---

[19] 270 U. S. 49.

[20] 140 U. S. 383.

[21] 147 U. S. 1. For many references to court decisions regarding water boundaries see Hyde, C. C., International law, vol. 1, pp. 243–248, Boston, 1922; and Clark, F. E., A treatise on the law of surveying and boundaries, p. 38 and ch. 14, Indianapolis, 1922.

[22] 246 U. S. 158.

[23] 147 U. S. 11.

[24] See brief for the United States in Marine Railway & Coal Co. v. the United States, U. S. Supreme Court, October term, 1920, p. 70.

[25] Idem, p. 155.

[26] 246 U. S. 176.

[27] 3 Howard 212; 9 Howard 471; 13 Howard 25.

Grants of land by the United States bordering on navigable waters extend to the mean high-water line, but State laws differ in this respect.

When a State is admitted to the Union it becomes vested with the title to lands under navigable waters up to mean high-water mark.[29]

What constitutes the high-water line on the shores of oceans, lakes, and rivers has been the subject of a great many court decisions, which may be summarized as follows:[30]

> The point on the bank or shore[31] up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic.

The following are Supreme Court definitions:[32]

> The bed of the river includes * * * all of the area which is kept practically bare of vegetation by the wash of the waters of the river from year to year * * *; although parts of it are left dry for months at a time. * * * The bank of the river [the Red River] * * * is the water-washed and relatively permanent elevation or declivity [commonly called a cut bank] at the outer line of the river bed which separates the bed from the adjacent upland * * * and serves to confine the waters within the bed * * *. The boundary intended is on and along the bank at the average or mean level attained by the waters when they reach and wash the bank without overflowing it.

The shore line is "the line which is washed by the water wherever it covers the bed of the river within its banks."[33] It lies "along the bank at the mean level attained by the waters of the river when they reach and wash the bank without overflowing it."[34]

The question has often been asked whether a boundary defined by statute or treaty, as on a specified parallel of latitude or meridian of longitude, should be located by direct astronomic observations or from geodetic computations giving a mean position derived from a great number of observations. It has generally been agreed that an astronomic location is the proper one, but astronomic and geodetic positions may differ materially. For example the astronomic stations on the 49th parallel boundary east of the Rocky Mountains vary from 6 seconds north to 8 seconds south of the mean parallel of latitude—or a range of more than a quarter of a mile. It seems likely that for future surveys geodetic positions will be used wherever available.[35] (See p. 174.)

---

[28] See Opinions of the Attorney General, vol. 8, p. 443; also 94 U. S. 324; 138 U. S. 226; 255 U. S. 56; and Clark, F. E., A treatise on the law of surveying and boundaries, p. 295, 1922.

[29] 140 U. S. 371; 94 U. S. 325.

[30] 156 Wisconsin 261, 272. See also 258 U. S. 574.

[31] For references to the meaning of shore and shore line see 224 Illinois 43; 79 North Eastern 296, 1907; 12 Lawyer's Reports Annotated, new ser., 687, 1908; 53 Arkansas 314, 1890; 13 South Western 931, 1890; 8 Lawyer's Reports Annotated, 559, 1890.

[32] Oklahoma v. Texas [Red River boundary case], 260 U. S. 632, 645.

[33] 13 Howard 418. See also 5 Wheaton 379.

[34] See opinion of the attorney general of the State of New York, Sept. 30, 1925, relative to the meaning of the "line of high water," which gives references to numerous decisions.

All boundary lines should be well marked, the size and character of the marks to depend on the importance of the line. (See pl. 2.) Many State boundaries, even some run in recent years, have been very inadequately marked, blazes on trees or stones so small that they could be easily carried off having been used. Hundreds of thousands of dollars spent in litigation and in the resurvey of old lines would have been saved had the lines been properly marked when first run. Many lines have marks at intervals of 1 mile. A better rule to follow is to place the marks in such a way that from any one of them two others may be seen, all obstructing trees and brush being cleared away. Marks should also be placed at road crossings and other important points.

A State-line mark should project not less than 3 feet above ground (4 feet is better) and should be so firmly set that it can not be easily overturned nor disturbed by frost. These conditions are most easily met by constructing monuments of concrete or of metal posts set on concrete bases. Each monument should have the State names on opposite sides; it should bear also the year of survey, an identifying number, and, if practicable, a reference to the treaty or act in accordance with which the line was run. The following specifications were prepared for the monuments on the New York-Connecticut boundary, survey of 1909–10, and are quoted as affording examples of adequate marks:

> The monuments are to be of good-quality light-colored granite, free from seams or other defects, straight and of full size throughout, not less than 9 nor more than 10 feet in length, 12 inches square 4 feet down from the top, tapering from 12 inches square to not over 15 inches square in the next 1½ feet and not less than 12 inches nor more than 20 inches on any face the rest of the distance. The top and the four sides of each monument for a distance of 4 feet from the top are to be cut smooth at right angles with each other and finished with 6-cut work. The tapering portion to be pointed to a smooth even surface to conform to the dimensions given. The remaining portions to be left as split, but full size, not less than 12 inches square throughout, the bottom to be not less than 12 inches square and substantially at right angles to the sides, and every point of the lower 5 feet of the stone must lie outside the planes of the smooth-cut portion. On one side will be cut the letters "N. Y."; on the opposite side will be cut the letters "CONN." On the third side will be cut the figures "1909." * * * Additional similar letters shall be cut as may be ordered. * * * The letters "N. Y." and "CONN." are to be 5 inches high; the figures to be 4 inches high. All letters to be cut with V-shaped indentations at least ⅓ inch deep.

---

[35] For a discussion of this subject see Report of the survey of the boundary between the United States and Canada: 44th Cong., 2d sess., S. Ex. Doc. 41. pp. 260, 261, 267, 1878. See also Am. Soc. Civil Eng. Proc., October, 1926, p. 1699, and March, 1927, p. 428.

These monuments were set in concrete bases 4 feet square and 5 feet deep.

The most recent practice in marking curved or crooked boundaries is to make them a series of connected straight lines, and for water boundaries to set suitable reference marks on shore. This plan was authorized by the British treaty of 1908 for the rivers on the Canadian boundary and was adopted in marking the Massachusetts-Rhode Island line.

The boundary marks should be protected by law and should be inspected frequently and repaired whenever necessary. Some States provide for such attention—New York at 3-year intervals, Pennsylvania and Massachusetts at 5-year intervals.[36]

A United States statute, approved March 4, 1909, makes it a misdemeanor to molest any monument or witness tree on a Government survey. It provides as follows:[37]

> Whoever shall willfully destroy, deface, change, or remove to another place any section corner, quarter-section corner, or meander post, on any Government line of survey, or shall willfully cut down any witness tree or any tree blazed to mark the line of a Government survey, or shall willfully deface, change, or remove any monument or bench mark of any Government survey, shall be fined not more than two hundred and fifty dollars, or imprisoned not more than six months, or both.

The necessity for preserving boundary marks was recognized by Moses, who wrote (Deuteronomy xix, 14): "Thou shalt not remove thy neighbor's landmark."

Many references to court decisions regarding boundaries can be found in the following publications:

Clark, F. E., A treatise on the law of surveying and boundaries, chap. 21, Indianapolis, Bobbs-Merrill Co., 1922.

Mack, William, Cyclopedia of law and procedure, vol. 36, p. 842, New York, American Law Book Co., 1910.

Mack, William, and Hale, W. B., Corpus juris, Boundaries, vol. 9, pp. 145–298, New York, American Law Book Co., 1916.

McKinley, W. M., and Rich, B. A., Ruling case law, Boundaries, vol. 4, pp. 77–132, 1914, and States, vol. 25, pp. 373–376, Northport, N. Y., Edward Thompson Co., 1916.

Michie, T. J., The encyclopedia of Supreme Court reports, vol. 3, pp. 494–507, Charlottesville, Va., 1909.

Moore, J. B., A digest of international law: 56th Cong., 2d sess., H. Doc. 551, vol. 1, pp. 272, 273, 618, 619, 747, 1906.

Skeleton, R. E., The legal elements of boundary surveying, Indianapolis, 1929.

Taylor, R. H., A treatise on the law of boundaries and fences, Albany, William Gould & Son, 1874.

Digest of U. S. Supreme Court reports (subject "Boundaries"), vol. 3, pp. 1339–1357, Rochester, N. Y., 1928.

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[36] See New York laws for 1887, ch. 421, and for 1892, ch. 678; Pennsylvania act approved May 4, 1889; and Massachusetts revised laws, ch. 1, sec. 4.

[37] Crim. Code, sec. 57; 35 Stat. L. 1099.

BOUNDARIES OF THE UNITED STATES AND ADDITIONS TO ITS TERRITORY

BOUNDARIES OF THE UNITED STATES

PROVISIONAL TREATY WITH GREAT BRITAIN, 1782

The original limits of the United States were first definitely described in the provisional treaty concluded with Great Britain November 30, 1782. The second article of that treaty defines them as follows[38] (see fig. 2):

ARTICLE II. From the northwest angle of Nova Scotia, viz, that angle which is formed by a line drawn due north from the source of St. Croix River to the highlands; along the highlands which divide those rivers that empty themselves into the river St. Lawrence, from those which fall into the Atlantic Ocean, to the northwesternmost head of Connecticut River; thence down along the middle of that river to the 45th degree of north latitude; from thence, by a line due west on said latitude until it strikes the river Iroquois or Cataraquy [St. Lawrence]; thence along the middle of said river into Lake Ontario, through the middle of said lake until it strikes the communication by water between that lake and Lake Erie; thence along the middle of said communication into Lake Erie, through the middle of said lake until it arrives at the water communication between that lake and Lake Huron; thence along the middle of said water communication into the Lake Huron; thence through the middle of said lake to the water communication between that lake and Lake Superior; thence through Lake Superior northward of the Isles Royal and Phelippeaux, to the Long Lake; thence through the middle of said Long Lake, and the water communication between it and the Lake of the Woods, to the said Lake of the Woods; thence through the said lake to the most northwestern point thereof, and from thence on a due west course to the river Mississippi; thence by a line to be drawn along the middle of the said river Mississippi untill it shall intersect the northernmost part of the 31st degree of north latitude. South, by a line to be drawn due east from the determination of the line last mentioned, in the latitude of 31 degrees north of the equator, to the middle of the river Apalachicola or Catahouche; thence along the middle thereof to its junction with the Flint River; thence straight to the head of St. Mary's River; and thence down along the middle of St. Mary's River to the Atlantic Ocean. East, by a line to be drawn along the middle of the river St. Croix, from its mouth in the bay of Fundy to its source, and from its source directly north to the aforesaid highlands which divide the rivers that fall into the Atlantic Ocean from those which fall into the river St. Lawrence; comprehending all islands within twenty leagues of any part of the shores of the United States, and lying between lines to be drawn due east from the points where the aforesaid boundaries between Nova Scotia on the one part and East Florida on the other, shall respectively touch the Bay of Fundy and the Atlantic Ocean; excepting such islands as now are, or heretofore have been, within the limits of the said province of Nova Scotia. [See p. 160 for a separate article attached to this treaty.]

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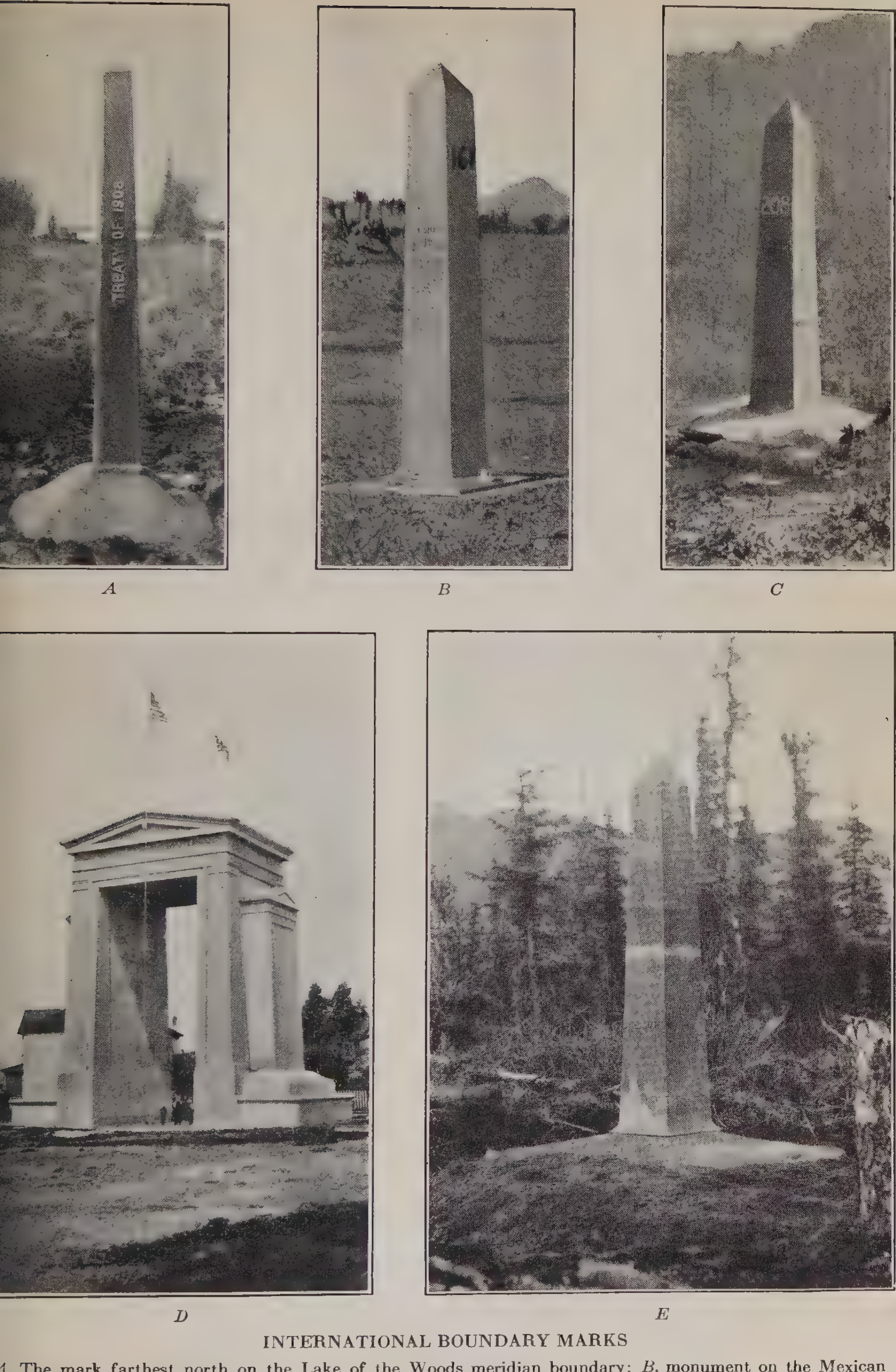
[38] Malloy, W. M., Treaties, conventions [etc.] between the United States and other powers, 1776–1909; 61st Cong., 2d sess., S. Doc. 357, vol. 1, p. 581, 1913. Mowry, W. A., The territorial growth of the United States. New York, Silver, Burdett & Co., pp. 16–25, 1902 (review of the negotiations preceding the signing of this treaty).

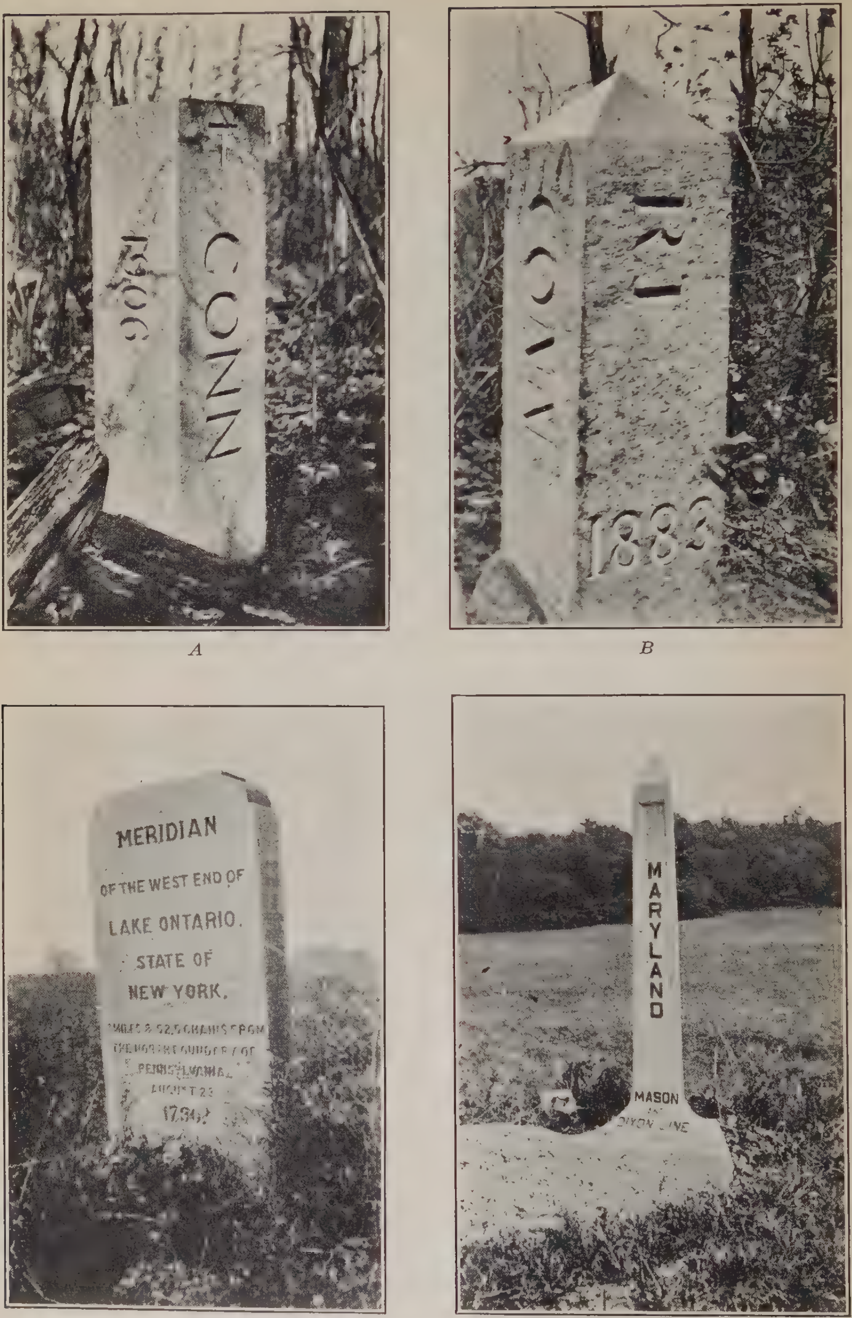


A B C

D E

INTERNATIONAL BOUNDARY MARKS

The mark farthest north on the Lake of the Woods meridian boundary; *B*, monument on the Mexican boundary; *C*, a cast-iron post on the 49th parallel boundary; *D*, Peace Portal at Blaine, Wash., on the 49th parallel boundary; *E*, type of large monument on the Alaskan boundary.


CONN
1906
CONN
R I
1883
MERIDIAN
OF THE WEST END OF
LAKE ONTARIO.
STATE OF
NEW YORK.
MARYLAND
MASON
DIXON LINE

A

B

C

D

STATE BOUNDARY MARKS

A, Northeast corner of Connecticut; *B*, corner between Rhode Island, Massachusetts, and Connecticut; *C*, at north end of line between New York and Pennsylvania, 400 feet from shore of Lake Erie; *D*, on State line north of Howard, Md.

TREATY WITH GREAT BRITAIN, 1783

The definite treaty of peace with Great Britain, concluded September 3, 1783,[39] defines the boundaries of the United States in terms similar to those of the provisional treaty.

The northern boundary became at once a fruitful source of dissension between the two countries. From the time of the conclusion of peace almost to the present day the definite location of this line has been the subject of a series of treaties, commissions, and surveys. An outline history of the settlement of this dispute follows.

TREATY OF LONDON, 1794

The fourth article of the treaty of London,[40] signed November 19, 1794, provided that

> Whereas it is uncertain whether the river Mississippi extends so far to the northward as to be intersected by a line to be drawn due west from the Lake of the Woods, in the manner mentioned in the treaty of peace between His Majesty and the United States: * * * the two parties will proceed, by amicable negotiations, to regulate the boundary line in that quarter.

This matter was not settled, however, until 1818.

The fifth article of the same treaty makes provision for settling another doubtful point, as follows:

> Whereas doubts have arisen what river was truly intended under the name of the river St. Croix, mentioned in the said treaty of peace, and forming a part of the boundary therein described; that question shall be referred to the final decision of commissions to be appointed in the following manner, viz, * * *

Here follow provisions that His Majesty and the President of the United States should each appoint a commissioner, and that these two commissioners should agree on a third, or if they should fail to agree on the third, he was to be chosen by lot in their presence.

Which was the true St. Croix River had been a matter of controversy between the governments of Massachusetts and Nova Scotia since the year 1764.

The commissioners appointed under the foregoing provisions decided, on October 25, 1798, that the river called Schoodiac and the northern branch thereof (called Cheputnaticook) is the true River St. Croix, and that its source is at the northernmost headspring of the northern branch aforesaid.[41] A monument was erected at that spot under the direction of the commissioners.

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[39] Malloy, W. M., op. cit., vol. 1, p. 586.

[40] Idem, p. 594.

[41] Gallatin, Albert, The right of the United States of America to the northeastern boundary claimed by them, p. 9, New York, 1840.

TREATY OF GHENT, 1814

By the treaty of peace concluded at Ghent[42] December 24, 1814, it was agreed to provide for a final adjustment of the boundaries described in the treaty of 1783 that had not yet been ascertained and determined, embracing certain islands in the Bay of Fundy and the whole of the boundary line from the source of the River St. Croix to the most northwestern point of the Lake of the Woods.

By article 4 provision was made for the appointment of commissioners to settle the title to several islands in the Bay of Passamaquoddy, which is a part of the Bay of Fundy, and the island of Grand Manan, in the Bay of Fundy. The fifth article made provision for the appointment of commissioners to settle the boundary from the source of the River St. Croix to the River Iroquois or Cataraquy [St. Lawrence]. The sixth and seventh articles provided for commissioners to continue the line to the Lake of the Woods.

It was provided by this treaty that in case any of the boards of commissioners were unable to agree they should make separately or jointly a report or reports to their respective governments stating the points on which they differed and the grounds on which they based their respective opinions. These reports were to be referred to some friendly sovereign or State for arbitration.

The first and third boards of commissioners above mentioned came to agreements, and the parts of the boundary referred to them were thus finally determined; but the commissioners appointed under the fifth article, after sitting nearly five years, could not agree on any of the matters referred to them, nor even on a general map of the country exhibiting the boundaries respectively claimed by each party. They accordingly made separate reports to their governments, as provided in the treaty.

The first of these commissions awarded Moose, Dudley, and Frederick Islands to the United States and all other islands in Passamaquoddy Bay and the island of Grand Manan to Great Britain.

The following is the text of the report of the third of these commissions, which had under consideration that portion of the northern boundary between the point where the 45th parallel of north latitude strikes the St. Lawrence and the point where the boundary reaches Lake Superior:

Decision of the commissioners under the sixth article of the treaty of Ghent, done at Utica, in the State of New York, 18th June, 1822[43]

[We] do decide and declare that the following-described line (which is more clearly indicated on a series of maps accompanying this report, exhibiting correct surveys and delineations of all the rivers, lakes, water communications, and islands embraced by the sixth article of the treaty of Ghent, by a black line shaded on the British side with red, and on the American side with blue; and each sheet of which series of maps is identified by a certificate, subscribed by the commissioners, and by the two principal surveyors employed by them), is the true boundary intended by the two before-mentioned treaties, that is to say:

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[42] Malloy, W. M., op. cit., vol. 1, p. 615; 8 Stat. L. 220.

[43] Malloy, W. M., op. cit., vol. 1, p. 621.

Beginning at a stone monument, erected by Andrew Ellicott, esq., in the year of our Lord 1817, on the south bank, or shore, of the said river Iroquois or Cataraqua (now called the St. Lawrence), which monument bears south 74° 45′ west, and is 1,840 yards distant from the stone church in the Indian village of St. Regis, and indicates the point at which the forty-fifth parallel of north latitude strikes the said river; thence running north 35° 45′ west into the river, on a line at right angles with the southern shore, to a point 100 yards south of the opposite island, called Cornwall Island; thence turning westerly and passing around the southern and western sides of said island, keeping 100 yards distant therefrom, and following the curvatures of its shores, to a point opposite to the northwest corner, or angle, of said island; thence to and along the middle of the main river, until it approaches the eastern extremity of Barnhart's Island; thence northerly, along the channel which divides the last-mentioned island from the Canada shore, keeping 100 yards distant from the island, until it approaches Sheik's Island; thence along the middle of the strait which divides Barnhart's and Sheik's islands to the channel called the Long Sault, which separates the two last-mentioned islands from the lower Long Sault Island; thence westerly (crossing the center of the last-mentioned channel) until it approaches within 100 yards of the north shore of the Lower Sault Island; thence up the north branch of the river, keeping to the north of, and near, the Lower Sault Island, and also north of, and near, the Upper Sault (sometimes called Baxter's) Island, and south of the two small islands, marked on the map A and B, to the western extremity of the Upper Sault, or Baxter's Island; thence passing between the two islands called the Cats, to the middle of the river above; thence along the middle of the river, keeping to the north of the small islands marked C and D; and north also of Chrystler's Island and of the small island next above it, marked E, until it approaches the northeast angle of Goose Neck Island; thence along the passage which divides the last-mentioned island from the Canada shore, keeping 100 yards from the island to the upper end of the same; thence south of, and near, the two small islands called the Nut Islands; thence north of, and near, the island marked F, and also of the island called Dry or Smuggler's Island; thence passing between the islands marked G and H, to the north of the island called Isle au Rapid Platt; thence along the north side of the last-mentioned island, keeping 100 yards from the shore to the upper end thereof; thence along the middle of the river, keeping to the south of, and near, the islands called Cousson (or Tussin) and Presque Isle; thence up the river, keeping north of, and near, the several Gallop Isles numbered on the map 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, and also of Tick, Tibbets, and Chimney islands; and south of, and near, the Gallop Isles, numbered 11, 12, and 13, and also of Duck, Drummond, and Sheep islands; thence along the middle of the river, passing north of island No. 14, south of 15, and 16, north of 17, south of 18, 19, 20, 21, 22, 23, 24, 25, and 28, and north of 26[44] and 27; thence along the middle of the river, north of Gull Island, and of the islands No. 29, 32, 33, 34, 35, Bluff Island, and No. 39, 44, and 45, and to the south of No. 30, 31, 36, Grenadier Island, and No. 37, 38, 40, 41, 42, 43, 46, 47, and 48, until it approaches the east end of Well's Island; thence to the north of Well's

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[44] The line is drawn south of No. 26 on the map filed in Washington.

Island, and along the strait which divides it from Rowe's Island, keeping to the north of the small islands No. 51, 52, 54, 58, 59, and 61, and to the south of the small islands numbered and marked 49, 50, 53, 55, 57, 60, and X, until it approaches the northeast point of Grindstone Island; thence to the north of Grindstone Island, and keeping to the north also of the small islands No. 63, 65, 67, 68, 70, 72, 73, 74, 75, 76, 77, and 78, and to the south of No. 62, 64, 66, 69, and 71, until it approaches the southern point of Hickory Island; thence passing to the south of Hickory Island, and of the two small islands lying near its southern extremity, numbered 79 and 80; thence to the south of Grand or Long Island, keeping near its southern shore, and passing to the north of Carlton Island, until it arrives opposite to the southwestern point of said Grand Island, in Lake Ontario; thence, passing to the north of Grenadier, Fox, Stony, and the Gallop islands, in Lake Ontario, and to the south of, and near, the islands called the Ducks, to the middle of the said lake; thence westerly, along the middle of said lake, to a point opposite the mouth of the Niagara River; thence to and up the middle of the said river to the Great Falls; thence up the Falls through the point of the Horse Shoe, keeping to the west of Iris or Goat Island, and of the group of small islands at its head, and following the bends of the river so as to enter the strait between Navy and Grand islands; thence along the middle of said strait to the head of Navy Island; thence to the west and south of, and near to, Grand and Beaver islands, and to the west of Strawberry, Squaw, and Bird islands, to Lake Erie[45]; thence southerly and westerly, along the middle of Lake Erie, in a direction to enter the passage immediately south of Middle Island, being one of the easternmost of the group of islands lying in the western part of said lake; thence along the said passage, proceeding to the north of Cunningham's Island, of the three Bass Islands, and of the Western Sister, and to the south of the islands called the Hen and Chickens, and of the Eastern and Middle Sisters; thence to the middle of the mouth of the Detroit River, in a direction to enter the channel which divides Bois-Blanc and Sugar Islands; thence up the said channel to the west of Bois-Blanc Island, and to the east of Sugar, Fox, and Stony islands, until it approaches Fighting or Great Turkey Island; thence along the western side, and near the shore of said last-mentioned island to the middle of the river above the same; thence along the middle of said river, keeping to the southeast of, and near, Hog Island, and to the northwest, of and near the island Isle à la Pache, to Lake Saint Clair; thence through the middle of said lake in a direction to enter that mouth or channel of the river St. Clair, which is usually denominated the Old Ship Channel; thence along the middle of said channel, between Squirrel Island on the southeast, and Herson's Island on the northwest, to the upper end of the last-mentioned island, which is nearly opposite to Point aux Chênes, on the American shore; thence along the middle of the river St. Clair, keeping to the west of, and near, the islands called Belle Riviere Isle, and Isle aux Cerfs, to Lake Huron; thence through the middle of Lake Huron, in a direction to enter the strait or passage between Drummond's Island on the west, and the Little Manitou Island on the east; thence through the middle of the passage which divides the two last-mentioned islands; thence turning northerly and westerly, around the eastern and northern shores of Drummond's Island, and proceeding in a direction to enter the passage between the island of St. Joseph's and the American shore, passing to the north of the intermediate islands No. 61, 11, 10, 12, 9, 6, 4, and 2, and to the south of those numbered 15, 13, 5, and

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[45] Horseshoe Reef, which is near the outlet of Lake Erie, was ceded to the United States Dec. 9, 1850, as a site for a lighthouse.

> 1; thence up the said last-mentioned passage, keeping near to the island St. Joseph's, and passing to the north and east of Isle à la Crosse, and of the small islands numbered 16, 17, 18, 19, and 20, and to the south and west of those numbered 21, 22, and 23, until it strikes a line (drawn on the map with black ink and shaded on one side of the point of intersection with blue, and on the other side with red), passing across the river at the head of St. Joseph's Island, and at the foot of the Neebish Rapids, which line denotes the termination of the boundary directed to be run by the sixth article of the treaty of Ghent.
>
> And the said commissioners do further decide and declare that all the islands lying in the rivers, lakes and water communications, between the before-described boundary line and the adjacent shores of Upper Canada, do, and each of them does, belong to His Britannic Majesty, and that all the islands lying in the rivers, lakes, and water communications, between the said boundary line and the adjacent shores of the United States, or their territories, do, and each of them does, belong to the United States of America, in conformity with the true intent of the second article of the said treaty of 1783, and of the sixth article of the treaty of Ghent.

In accordance with the terms of the treaty of Ghent a survey was made of the St. Lawrence and the Great Lakes, from which a map was drawn. This map was photolithographed and was published in 29 sheets by the United States Lighthouse Board in 1891.[46]

CONVENTION WITH GREAT BRITAIN, 1818

The convention with Great Britain concluded October 20, 1818, extended the boundary line westward along the 49th parallel of latitude to the "Stony" [Rocky] Mountains and provided that the country beyond these mountains should for 10 years remain open to both parties. Two articles of the convention are as follows:[47]

> ARTICLE II. It is agreed that a line drawn from the most northwestern point of the Lake of the Woods, along the forty-ninth parallel of north latitude, or if the said point shall not be in the forty-ninth parallel of north latitude, then that a line drawn from the said point due north or south, as the case may be, until the said line shall intersect the said parallel of north latitude, and from the point of such intersection due west along and with the said parallel shall be the line of demarkation between the territories of the United States, and those of His Britannic Majesty, and that the said line shall form the northern boundary of the said territories of the United States, and the southern boundary of the territories of His Britannic Majesty, from the Lake of the Woods to the Stony Mountains.
>
> ARTICLE III. It is agreed, that any country that may be claimed by either party on the northwest coast of America, westward of the Stony Mountains, shall, together with its harbours, bays, and creeks, and the navigation of all rivers within the same, be free and open, for the term of ten years from the date of the signature of the present convention, to the vessels, citizens, and subjects of the two Powers: it being well understood, that this agreement is not to be construed to the prejudice of any claim, which either of the two high contracting parties may have to any part of the said country, nor shall it be taken

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[46] See reference to resurvey under treaty of 1908, p. 21.

[47] Malloy, W. M., op. cit., vol. 1, p. 632.

to affect the claims of any other Power or State to any part of the said country; the only object of the high contracting parties, in that respect being to prevent disputes and differences amongst themselves.

The initial point of this boundary, which the convention fixed as "the most northwestern point" of the Lake of the Woods, was selected in 1824 by Dr. J. L. Tiarks, astronomer, and David Thompson, surveyor, who were employed by the British Government for this purpose, and their report was accepted by the United States commissioners. The point selected was about 27.5 miles north of the 49th parallel, in a swamp, where it was not feasible to establish a permanent mark, but astronomical observations were made at a reference point about 4,600 feet farther south. A pile of logs 12 feet high and 7 feet square was erected at this point, the remains of which were identified by the commissioners of 1872, who established an iron monument on the boundary a short distance from its site.[48]

This monument was recovered by the commission of 1912 and reset in concrete. It is now known as boundary mark No. 925, and its position is latitude 49° 22′ 39.6″, longitude 95° 09′ 11.6″. (See pl. 2, *A*.) Two reference marks were established in 1912, in latitude 49° 23′ 04.49″, to fix a point which falls in water about half a mile north of boundary mark No. 925. This point was adopted by the treaty of 1925 as the north limit of the United States in the Lake of the Woods, in place of the northwesternmost angle. There are 13 metal monuments on the north-south boundary line from this point to the 49th parallel, of which No. 925 is the farthest north.

In 1824 negotiations were resumed between the two countries for the settlement, among other things, of the boundary west of the Rocky Mountains, but no conclusion was reached; the British Government claimed that the boundary line should follow the 49th parallel westward to the point where this parallel strikes the great northwestern branch of the Columbia River, thence down the middle of that river to the Pacific Ocean.

In 1826 negotiations were resumed, and several compromises were proposed by both parties, but without satisfactory results. After this the whole matter remained in abeyance until the special mission of Lord Ashburton to this country in 1842.

Meanwhile the unsettled questions regarding the eastern part of the north boundary again came up. The case having reached that stage at which it became necessary to refer the points of difference to a friendly sovereign or State, the two powers found it expedient to regulate the proceedings and make provisions in relation to such reference, and on September 29, 1827, they concluded a convention to that end.[49] The respective claims of the United States and Great Britain were as follows (see fig. 1):

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[48] See Report on the survey of the northern boundary of the United States: 44th Cong., 2d sess., S. Ex. Doc. 41, pp. 80–82, 1878. Final report of the International Joint Commission on the Lake of the Woods reference, p. 138, Washington, 1917. (This book contains a bibliography of publications for the Lake of the Woods region.) White, James, Boundary disputes and treaties, p. 886, Toronto, 1914. See also Hinks, A. R., Notes on the technique of boundary delimitation: Geog. Jour. (London), December, 1921, pp. 438–441.

Boundary claimed by the United States: From the source of the River St. Croix (a point of departure mutually acknowledged) the boundary should be a due north line for about 140 miles, crossing the River St. John at about 75 miles. At about 97 miles it reaches a ridge or highland which divides tributary streams of the River St. John, which falls into the Bay of Fundy, from the waters of the River Ristigouche, which falls through the Bay des Chaleurs into the Gulf of St. Lawrence. In its further course the said due north line, after crossing several upper branches of the River Ristigouche, reaches, at about 140 miles, the highlands which divide the waters of the said River Ristigouche from the tributary streams of the River Metis, which falls into the River St. Lawrence. Thence the line should run westerly and southwesterly along the highlands which divide the sources of the several rivers (from the Metis to the St. Francis) that empty themselves into the River St. Lawrence—from the sources of the tributaries of the rivers Ristigouche, St. John, Penobscot, Kennebec, and Connecticut, all of which either mediately or immediately fall into the Atlantic Ocean.

Boundary claimed by Great Britain: From the source of the River St. Croix the boundary should be a due north line about 40 miles to a point at or near Mars Hill; then it should run westerly about 115 miles along the highlands that divide the sources of the tributaries of the River St. John from the sources of the River Penobscot to a spot called Metjarmette Portage, near the source of the River Chaudiere.

From this point the line coincides with the line claimed by the United States as far as the northwesternmost head of the Connecticut River. Great Britain claimed one of several small streams to be the northwesternmost tributary of the Connecticut River, and the United States another.

The territory in dispute comprised an area of about 12,000 square miles. The British claims were based principally on a possible uncertainty as to the identity of the River St. Croix and the proper location of the "highlands."

The location of the source of the St. Croix was officially fixed by the declaration of commissioners in October, 1798. Its position as determined in 1899 is latitude 45° 56′ 37.007″ and longitude 67° 46′ 54.715″.[50]

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[49] Malloy, W. M., op. cit., vol. 1, p. 646. For a history of this dispute see Moore, J. B., History and digest of international arbitration, etc.: 53d Cong., 2d sess., H. Misc. Doc. 212, vol. 1, chs. 3 and 4, 1898.

[50] U. S. Coast and Geodetic Survey Special Pub. 46, p. 30, 1918.

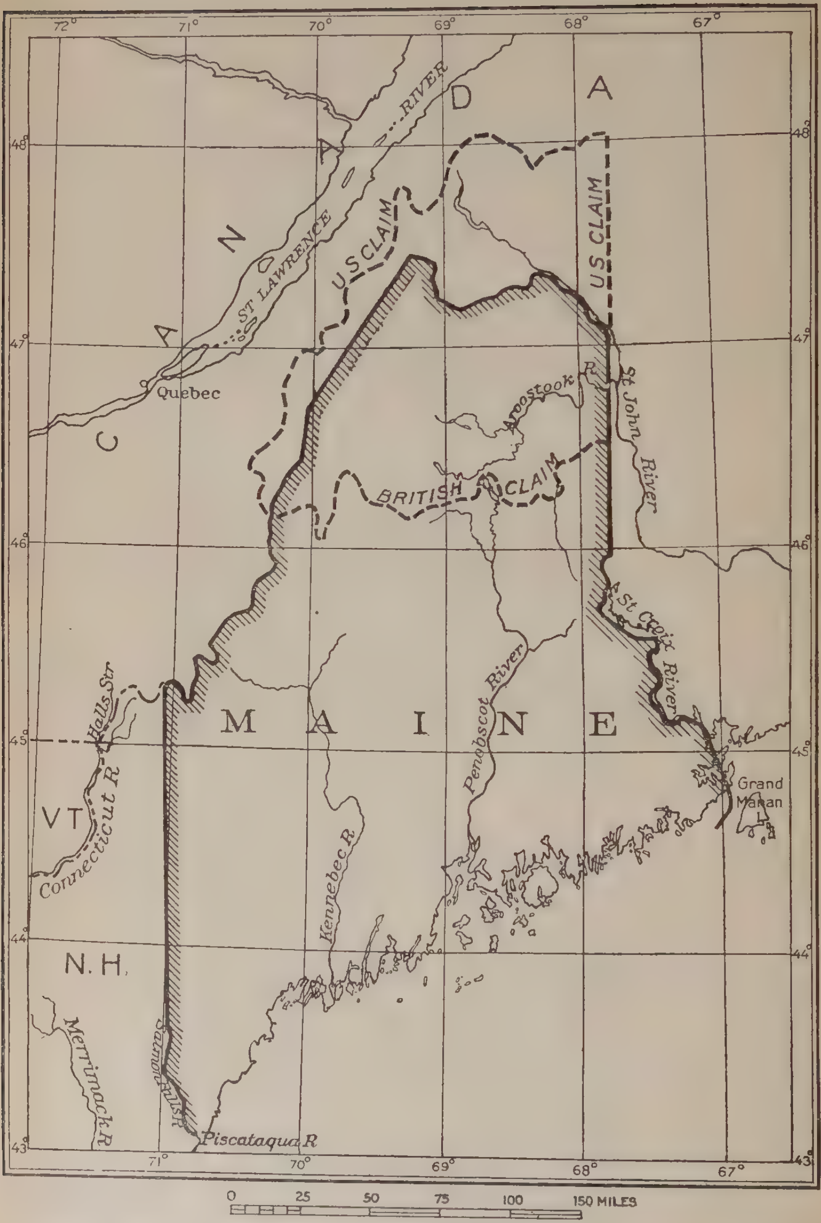
72°
71°
70°
69°
68°
67°
48°
47°
46°
45°
44°
43°
C A N A D A
ST LAWRENCE RIVER
Quebec
US CLAIM
US CLAIM
BRITISH CLAIM
Aroostook R.
St John River
St Croix River
Grand Manan I.
M A I N E
Penobscot River
Kennebec R
Halls Str
Connecticut R
VT
N.H.
Merrimack R
Salmon Fall R
Piscataqua R
0
25
50
75
100
150 MILES

FIGURE 1.—Map of Maine showing claims of the United States and Great Britain

ARBITRATION BY KING OF THE NETHERLANDS

The King of the Netherlands was selected in 1829 by the two Governments as the arbiter, and each laid before him, in conformity with the provisions of the convention, all the evidence intended to be brought in support of its claim and two separate statements of the respective cases. His award, made in 1831, was as follows:[51]

> We are of the opinion: That it will be suitable (*il conviendra*) to adopt, as the boundary of the two States, a line drawn due north from the source of the river St. Croix to the point where it intersects the middle of the *thalweg* of the river St. John; thence, the middle of the *thalweg* of that river, ascending it, to the point where the river St. Francis empties itself into the river St. John; thence, the middle of the *thalweg* of the river St. Francis, ascending it to the source of its southwesternmost branch, which source we indicate on the Map A[52] by the letter X, authenticated by the signature of our Minister of Foreign Affairs; thence, in a line drawn due west to the point where it unites with the line claimed by the United States of America and delineated on the Map A; thence, by said line to the point at which, according to said map, it coincides with that claimed by Great Britain; and thence, the line traced on the map by the two Powers to the northwesternmost source of Connecticut River.
>
> * * * * * * *
>
> We are of the opinion that the stream situated farthest to the northwest, among these which fall into the northernmost of the three Lakes, the last of which bears the name of Connecticut Lake, must be considered as the northwesternmost head of Connecticut River.
>
> * * * * * * *
>
> We are of the opinion that it will be suitable to proceed to fresh operations to measure the observed latitude in order to mark out the boundary from river Connecticut along the parallel of the 45th degree of north latitude to the river Saint Lawrence, named in the treaties Iroquois or Cataraquy, in such a manner, however, that, in all cases, at the place called Rouse's Point the territory of the United States of America shall extend to the fort erected at that place, and shall include said fort and its Kilometrical radius.

However disposed the Government of the United States might have been to acquiesce in the decision of the arbiter, it had not the power to change the boundaries of a State without the consent of the State. Against that alteration the State of Maine entered a solemn protest by resolution of January 19, 1832, and the Senate of the United States accordingly refused to give its assent to the award.

The arbitration of the King of the Netherlands having failed, fruitless negotiations ensued for a period of 11 years. Unsuccessful attempts were made to conclude an agreement preparatory to another arbitration. The subject became a matter of great irritation, collisions occurred in the contested territory, and for a time it seemed certain that the controversy would result in war between the two powers.

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[51] Moore, J. B., op. cit., pp. 134–136.

[52] The New York Public Library has a facsimile copy, 62 by 63 inches, of the signed original map. Moore, op. cit., gives a corrected copy on a small scale.

The Legislature of Maine placed a large sum at the disposal of the governor for the defense of the State's rights, and a bill was passed by Congress providing funds for the use of an army.

Massachusetts, being an interested party in the location of this boundary, appointed a committee to investigate the matter; its report was published March 20, 1838, as Senate Document 67.[53] Gallatin[54] presents an excellent discussion of this dispute from the point of view of the United States, and White[55] treats of this boundary from the British side.[56]

WEBSTER-ASHBURTON TREATY WITH GREAT BRITAIN, 1842

In 1842, however, Great Britain gave proof, by the special mission of Lord Ashburton to the United States, of her desire for the preservation of peace and an amicable arrangement of the matter at issue. The subject of this mission was the settlement, not only of the northeastern boundary but also of the northern boundary west of the Rocky Mountains. Regarding the latter object, Lord Ashburton's instructions gave as the ultimatum of the British Government the boundary as above claimed (p. 14), and his mission had no result as far as this part of the boundary was concerned. An agreement was reached, however, in regard to the northeastern boundary, which, the consent of the State of Maine having been obtained, was embodied in the treaty concluded August 9, 1842. The following is the text of the part of this treaty relating to the boundary:[57]

ARTICLE I. It is hereby agreed and declared that the line of boundary shall be as follows: Beginning at the monument at the source of the river St. Croix as designated and agreed to by the Commissioners under the fifth article of the treaty of 1794, between the Governments of the United States and Great Britain; thence north, following the exploring line run and marked by the surveyors of the two Governments in the years 1817 and 1818, under the fifth article of the treaty of Ghent, to its intersection with the river St. John, and to the middle of the channel thereof; thence, up the middle of the main channel of the said river St. John, to the mouth of the river St. Francis; thence up the middle of the channel of the said river St. Francis, and of the lakes through which it flows, to the outlet of the Lake Pohenagamook; thence, southwesterly, in a straight line, to a point on the northwest branch of the river St. John, which point shall be ten miles distant from the main branch of the St. John, in a straight line, and in the nearest direction; but if the said point shall be found to be less than seven miles from the nearest point of the summit or crest of the highlands that divide those rivers which empty themselves into the river Saint Lawrence from those which fall into the river Saint John, then the said point shall be made to recede down the said northwest branch of the river St. John, to a point seven miles in a straight line from the said summit or crest; thence, in a straight line, in a course about south, eight degrees west, to the point where the parallel of latitude 46° 25′ north intersects the southwest branch of the St. John's; thence, southerly, by the said branch, to the source thereof in the highlands at the Metjarmette portage; thence, down along the said highlands which divide the waters which empty themselves into the river Saint Lawrence from those which fall into the Atlantic Ocean, to the head of Hall's Stream; thence, down the middle of said stream, till the line thus run intersects the old line of boundary surveyed and marked by Valentine and Collins, previously to the year 1774, as the 45th degree of north latitude, and which has been known and understood to be the line of actual division between the States of New York and Vermont on one side, and the British province of Canada on the other; and from said point of intersection, west, along the said dividing line, as heretofore known and understood, to the Iroquois or St. Lawrence River.

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[53] See 25th Cong., 2d sess., S. Doc. 431, 1838, for copy of report and map. See also 25th Cong., 3d sess., H. Doc. 181, 1839.

[54] Gallatin, Albert, The right of the United States of America to the northeastern boundary claimed by them, with maps, New York, 1840. One of the maps is a small-scale copy of "Map A."

[55] See White, James, Boundary disputes and treaties, Toronto, 1914, also Maine, Resolves of the legislature, 1828, January session.

[56] For other references to this dispute see Joint report upon the survey and demarcation of the boundary between the United States and Canada from the source of the St. Croix River to the St. Lawrence River, pp. 269–294, Washington, 1925; and Faris, J. T., The romance of the boundaries, ch. 1, New York, 1926.

[57] Malloy, W. M., op. cit., vol. 1, p. 651.

Article II. It is moreover agreed, that, from the place where the joint Commissioners terminated their labors under the sixth article of the treaty of Ghent, to wit, at a point in the Neebish Channel, near Muddy Lake, the line shall run into and along the ship-channel between Saint Joseph and St. Tammany Islands, to the division of the channel at or near the head of St. Joseph's Island; thence, turning eastwardly and northwardly around the lower end of St. George's or Sugar Island, and following the middle of the channel which divides St. George's from St. Joseph's Island; thence up the east Neebish Channel, nearest to St. George's Island, through the middle of Lake George; thence, west of Jonas' Island, into St. Mary's River, to a point in the middle of that river, about one mile above St. George's or Sugar Island, so as to appropriate and assign the said island to the United States; thence, adopting the line traced on the maps by the Commissioners, thro' the river St. Mary and Lake Superior, to a point north of Ile Royale, in said lake, one hundred yards to the north and east of Ile Chapeau, which last-mentioned island lies near the northeastern point of Ile Royale, where the line marked by the Commissioners terminates; and from the last-mentioned point, southwesterly, through the middle of the sound between Ile Royale and the northwestern mainland, to the mouth of Pigeon River, and up the said river, to and through the north and south Fowl Lakes, to the lakes of the height of land between Lake Superior and the Lake of the Woods; thence, along the water communication to Lake Saisaginaga, and through that lake; thence to and through Cypress Lake, Lac du Bois Blanc, Lac la Croix, Little Vermillion Lake, and Lake Namecan and through the several smaller lakes, straits, or streams, connecting the lakes here mentioned, to that point in Lac la Pluie, or Rainy Lake, at the Chaudière Falls, from which the Commissioners traced the line to the most northwestern point of the Lake of the Woods; thence, along the said line, to the said most northwestern point, being in latitude 49° 23′ 55″ north, and in longitude 95° 14′ 38″ west from the observatory at Greenwich;[58] thence, according to existing treaties, due south to its intersection with the 49th parallel of north latitude, and along that parallel to the Rocky Mountains. It being understood that all the water communications and all the usual portages along the line from Lake

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[58] This is the position of the north mark as determined in 1824. See p. 14 for later determination.

Superior to the Lake of the Woods, and also Grand Portage, from the shore of Lake Superior to the Pigeon River, as now actually used, shall be free and open to the use of the citizens and subjects of both countries.

* * * * * * *

ARTICLE VII. It is further agreed that the channels in the river St. Lawrence, on both sides of the Long Sault Islands and of Barnhart Island, the channels in the river Detroit on both sides of the island Bois Blanc, and between that island and both the American and Canadian shores, and all the several channels and passages between the various islands lying near the junction of the river St. Clair with the lake of that name, shall be equally free and open to the ships, vessels, and boats of both parties.[59]

By this treaty the United States obtained more than half of the disputed area, though nearly 1,000 square miles less than was awarded by the King of the Netherlands. The promise of reimbursement for cost of surveys and other expenses and the division of a large fund for timber cut in the disputed territory no doubt influenced Maine in agreeing to the boundary as fixed by the treaty.

Commissioners acting under this treaty in 1843–1847 surveyed the boundary line to a point where the 45th parallel intersects the St. Lawrence.[60]

The wording of the part of the treaty of 1783 relating to the northeastern boundary and its intent are so obvious that it seems strange that there should have been a dispute continuing for nearly 60 years regarding its interpretation. An English writer [61] in 1911 characterizes the action of Great Britain as an "attempted theft" and states that "the British claim had no foundation of any sort or kind."

Ganong,[62] in a monograph on the boundaries of New Brunswick, after a lengthy discussion of the boundary dispute and of the treaty of 1842 states:

> On the other hand, the few New Brunswickers of the present time who have examined the original sources of information have come to the conclusion that in the question of the northwest angle Maine was technically right and New Brunswick wrong, and that the Ashburton treaty took from Maine and gave to us a great territory to which we had not a technical right.

That a contrary view was held by many Canadians may be inferred from an article in the Yearbook and Almanac of Canada for 1868.[63]

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[59] By Article XXVI of the treaty with Great Britain of May 8, 1871, the St. Lawrence from its intersection with the 45th parallel to the sea was forever made "free and open for the purpose of commerce to the citizens of the United States."

[60] See 30th Cong., 1st sess., S. Doc. 71, 1848, and Report of the Regents of the University on the boundaries of the State of New York, vol. 2, p. 53, Albany, 1884.

[61] Mills, Lieut. Col. D. A., British diplomacy in Canada: Royal Colonial Inst. Jour., October, 1911, pp. 684–687.

[62] Ganong, W. F., A monograph on the evolution of the boundaries of New Brunswick: Royal Soc. Canada Proc. and Trans., 1901.

[63] Quoted in Report of the Regents of the University on the boundaries of the State of New York, vol. 2, pp. 65–75, Albany, 1884.

TREATY WITH GREAT BRITAIN, 1846

Between 1843 and 1846 there was considerable discussion regarding the boundary west of the Rocky Mountains, resulting in the treaty of 1846, which defined the boundary as far west as the Strait of Juan de Fuca. The following is that part of the treaty which describes the boundary:[64]

ARTICLE I. From the point on the forty-ninth parallel of north latitude, where the boundary laid down in existing treaties and conventions between the United States and Great Britain terminates, the line of boundary between the territories of the United States and those of Her Britannic Majesty shall be continued westward along the said forty-ninth parallel of north latitude to the middle of the channel which separates the continent from Vancouver's Island; and thence southerly through the middle of the said channel, and of Fuca's Straits, to the Pacific Ocean: Provided, however, that the navigation of the whole of the said channel and straits, south of the forty-ninth parallel of north latitude, remain free and open to both parties.

ARTICLE II. From the point at which the forty-ninth parallel of north latitude shall be found to intersect the great northern branch of the Columbia River, the navigation of the said branch shall be free and open to the Hudson's Bay Company, and to all British subjects trading with the same, to the point where the said branch meets the main stream of the Columbia, and thence down the said main stream to the ocean, with free access into and through the said river or rivers, it being understood that all the usual portages along the line thus described shall, in like manner, be free and open. In navigating the said river or rivers, British subjects, with their goods and produce, shall be treated on the same footing as citizens of the United States; it being, however, always understood that nothing in this article shall be construed as preventing, or intended to prevent, the Government of the United States from making any regulations respecting the navigation of the said river or rivers not inconsistent with the present treaty.

This treaty extended the line westward from the Rocky Mountains to the Pacific along the 49th parallel of latitude. This settled the northwestern boundary with the exception of the islands and passages in the Straits of Georgia and of Juan de Fuca, England claiming that the boundary should properly run through the Rosario Strait, the most eastern passage, whereas the United States claimed that it should follow the Strait of Haro. This matter was finally settled by a reference to the Emperor of Germany as an arbitrator, who decided it in favor of the United States on October 21, 1872.[65]

TREATY WITH GREAT BRITAIN, 1908

The treaty with Great Britain concluded April 11, 1908, described the boundary between the United States and Canada in eight sections and provided for the appointment of a joint commission to recover or restore previously established marks and to place new marks on unmarked sections.[66]

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[64] Malloy, W. M., op. cit., vol. 1, p. 657.

[65] Idem, p. 725.

[66] Idem, p. 815.

Eight of the nine articles of this treaty contained the following statement:

> The line so defined and laid down shall be taken and deemed to be the international boundary [etc.].

This, the commissioners decided, fixes the boundary in a definite position as marked, regardless of later changes which may occur in streams due to erosion, accretion, or avulsion.

TREATY WITH GREAT BRITAIN, 1910 [67]

In order to remove a slight uncertainty concerning the boundary line in Passamaquoddy Bay a treaty with Great Britain was concluded on May 21, 1910, which laid down the position of the line by courses and distances, starting from a point between Treat Island and Campobello Island, previously fixed by range lines, and running thence in a general southerly direction to the middle of Grand Manan Channel. Popes Folly Island and the lighthouse between Woodward Point and Cranberry Point were left within United States territory.

SURVEY AND MARKING OF THE NORTHERN BOUNDARY [68]

The retracement and remarking of the northern boundary of the United States from the summit of the Rocky Mountains to the Gulf of Georgia was completed in 1907. Since the treaty of 1908 was ratified the field work for the survey and marking of the remainder of the northern boundary has been completed. The computed lengths of the eight sections described in the treaty are as follows:

	Miles
Passamaquoddy Bay	[a] 25. 2
St. Croix River from its source to its mouth	[a] 129. 4
St. Lawrence River to source of St. Croix	[b] 670. 3
Great Lakes and St. Lawrence River	[a] 1, 288. 9
Northwesternmost point of Lake of the Woods [c] to the mouth of Pigeon River at Lake Superior (scaled from map)	[a] 425. 6
North point of Lake of the Woods (1925) to 49th parallel (26.6 miles), thence to summit of Rocky Mountains (860 miles)	[d] 886. 6
Summit of Rocky Mountains to Strait (or Gulf) of Georgia at Point Roberts	[d] 418. 5
Point Roberts to Pacific Ocean	[a] 142. 0
	3, 986. 5

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[a] Water boundary.

[b] Land and water boundary.

[c] See change in location by Article I, treaty of 1925.

[d] Land boundary.

[67] Charles, Garfield, Treaties, conventions, etc., between the United States and other powers: 62d Cong., 3d sess., S. Doc. 1063, p. 49, 1913.

[68] See report prepared for the Department of State by C. P. Anderson on the northern boundary of the United States with particular reference to the portions thereof which require more complete definition and marking, Washington, 1906.

Of the total approximately 1,749 miles is land boundary and 2,237 miles water boundary. The land portion of the boundary is marked by metal, stone, or concrete monuments; the water portion is defined by courses and distances between turning points (angles), and these points are referred to marks of metal or concrete on the banks or shores.

The final report for that part of the line from the source of the St. Croix to the St. Lawrence River [69] contains historical data, copies of treaties, geographic positions of all monuments, etc. There are 4,204 monuments and 548 reference marks for this part of the boundary.

The full report of the resurvey and marking of St. Lawrence River and the Great Lakes has been published by the Canadian Government.[70] It gives extracts from treaties, instructions to the commissioners, courses and distances between marks, and geographic positions and azimuths.

From the mouth of the Pigeon River to the northwesternmost point in the Lake of the Woods, as relocated by the treaty of 1925, the water boundary is defined by courses and distances between turning points on the boundary line, and these are referred to metal reference marks set in concrete or solid rock on the shores of the lakes and the banks of the streams.

From the northwesternmost point of the Lake of the Woods to the summit of the Rocky Mountains the boundary is composed of a north-south section, 26.6 miles long, which meets the 49th parallel at a point in the Lake of the Woods, and an east-west section, 860 miles long, approximately on the 49th astronomic parallel. This part of the boundary was first located in 1872 to 1876 and was marked by iron pillars, rock cairns, or earth mounds at intervals of 1 to 19 miles.[71] There were 382 marks in all, 40 of which were at astronomic stations. The cairns and earth mounds have now been replaced by iron monuments weighing about 400 pounds each (see pl. 2, *A* and *C*), or, in the mountains, by aluminum-bronze monuments set on concrete foundations and projecting 5 feet above the surface. Additional monuments have been so placed that no interval between two consecutive marks exceeds 2½ miles. This resurvey was completed in 1913, and 40 maps covering the line have been published.

From the summit of the Rocky Mountains to the Strait of Georgia 410 miles of land line on the 49th astronomic parallel was located by a joint commission between 1859 and 1862, and was marked by stone or iron pillars, rock piles, or mounds of earth at intervals ranging from a fraction of a mile to 25 miles.[72] A retracement of this line was completed in 1907. The new marks consist of aluminum-bronze pillars 5 feet high, weighing about 250 pounds each, set in concrete bases at intervals not exceeding 4 miles. The maps of this section of the boundary, 19 sheets, have been published.

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[69] Joint report upon the survey and demarcation of the boundary between the United States and Canada from the source of the St. Croix River to the St. Lawrence River, 512 pp. of text and 61 separate maps, Washington, 1925.

[70] Report of the International Waterways Commission upon the international boundary between the Dominion of Canada and the United States through St. Lawrence River and the Great Lakes, 286 pp., 29 maps, Ottawa, 1916.

[71] For details regarding the survey see 44th Cong., 2d sess., S. Ex. Doc. 41, 1877.

Along the 49th parallel in the Strait of Georgia, and through the Straits of Haro and Juan de Fuca to the Pacific Ocean, a distance of 142 miles, the boundary is defined by courses and distances between turning points, which are referred to reference marks consisting of concrete monuments and lighthouses on the shores. The report on this section of the boundary was published in 1921.[73]

Considerable information regarding the northern boundary of the United States may be found in articles by John W. Davis and Lawrence S. Mayo.[74]

TREATY WITH GREAT BRITAIN, 1925

Several minor changes were made in the northern boundary by the treaty concluded February 24, 1925.[75]

The northern terminus of the Lake of the Woods boundary was fixed at latitude 49° 23′ 04.49,″ longitude 95° 09′ 11.61″. (See p. 14.) By this change the United States lost about 2½ acres of water area.

Article II of the treaty made the lines between monuments established under the treaty of 1908 on the 49th parallel east of the Rocky Mountains straight lines, not following the curve of the parallel. The United States gained between 30 and 35 acres of land by this change.

Article III added a new course bearing S. 34° 42′ W., a distance of 2,383 meters (1.48 miles), from the terminus of the southeasterly line established by the treaty of 1910 in the Grand Manan Channel. Canada thereby made a net gain in water area of about 9 acres, which had previously been of "controversial jurisdiction."

Article IV provided for inspecting existing monuments, repairing defective ones, and adding new ones, if needed, by joint commissioners "at such times as they shall deem necessary."

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[72] See Baker, Marcus, Survey of the northwestern boundary of the United States, 1857–1861 : U. S. Geol. Survey Bull. 174, 1900. See also a history of the survey by Otto Klotz in Am. Geog. Rev., May, 1917, pp. 382–387. A report by the British Commissioner with descriptions and longitudes of marks for this survey is given in U. S. Foreign Office correspondence, 1865–1871, vol. 811, America, p. 1468.

[73] Reestablishment of the boundary between the United States and Canada, forty-ninth parallel to the Pacific Ocean, 95 pp., 1 map, Washington, 1921.

[74] The unguarded boundary: Geog. Rev., New York, October, 1922, pp. 585–601; April, 1923, pp. 255–265.

[75] 44 Stat. L., pt. 3, p. 2102.

TREATY WITH SPAIN, 1795

The southern boundary of the United States was described in definite terms by the treaties with Great Britain of 1782 and 1783 (see pp. 8–9), but its location was not accepted by Spain and was in dispute with that country until settled by the treaty concluded October 27, 1795,[76] wherein it was agreed that

> The southern boundary of the United States which divides their territory from the Spanish colonies of east and west Florida, shall be designated by a line beginning on the River Mississippi, at the northernmost part of the thirty-first degree of latitude north of the Equator, which from thence shall be drawn due east to the middle of the River Apalachicola, or Catahouche, thence along the middle thereof to its junction with the Flint; thence straight to the head of St. Mary's River, and thence down the middle thereof to the Atlantic Ocean.

Article IV of this treaty described the western boundary, which separated the "Spanish colony of Louisiana" from the United States, as being

> in the middle of the channel or bed of the River Mississippi, from the northern boundary of the said States to the completion of the thirty-first degree of latitude north of the Equator.

DISTANCES ALONG THE BOUNDARIES

Distances along the northern boundary of the United States

	Miles	
Maine:		
Atlantic Ocean to mouth of St. Croix River	25.2	
Mouth of St. Croix to source	129.4	
Source of St. Croix along northern line	77.6	
Westward along St. Johns River	72.0	
Along St. Francis River	42.6	
Diagonal line southwest	83.6	
Southwest branch of St. Johns to the highlands	38.4	
Along the highlands to the New Hampshire corner	141.3	
		610.1
New Hampshire:		
Maine corner to source of Halls Stream	33.3	
Halls Stream to north line of Vermont	26.6	
		59.9
Vermont: North line east and west on or near the forty-fifth parallel to middle of main channel of Lake Champlain		90.4
New York:		
Vermont corner in Lake Champlain west to St. Lawrence River	64.5	
Through St. Lawrence, Lake Ontario, Niagara River, and Lake Erie to Pennsylvania corner	380.7	
		445.2
Pennsylvania: Through part of Lake Erie		41.5
Ohio: Through part of Lake Erie		146.2
Michigan: North and west through lakes and rivers to Minnesota corner at mouth of Pigeon River		720.5

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[76] Malloy, W. M., op. cit., vol. 2, p. 1640.

	Miles	
Minnesota:		
Mouth of Pigeon River to northwest angle in Lake of the Woods	425.6	
Northwest angle in Lake of the Woods south to latitude 49°	26.6	
Along forty-ninth parallel to North Dakota corner	93.3	
		545.5
North Dakota: Along forty-ninth parallel		310.0
Montana: Along forty-ninth parallel		545.6
Idaho: Along forty-ninth parallel		44.7
Washington:		
Along forty-ninth parallel	285.5	
Gulf of Georgia to Pacific Ocean opposite Cape Flattery	142.0	
		427.5
		3,987

The distances given above are as projected on a sea-level plane. All these boundaries, on land as well as through water, consist of straight lines between "turning points." Some of these lines—in New Hampshire, for example—may be less than 50 feet long. The New Hampshire boundary, if measured in steps of a quarter of a mile, would be only 49 miles long.

Distances along the southern boundary of the United States

	Miles
Texas (along Rio Grande, approximate)	1,321
New Mexico	179.5
Arizona (19.1 miles along Colorado River)	372.5
California	140.4
	2,013.4

THE MITCHELL MAP

Plate 5 (in pocket) is a half-scale reproduction of one of the seven or more English issues (the first impression of the third edition) of the "Map of the British and French dominions in North America," by Dr. John Mitchell, possibly printed between 1762 and 1775 but retaining the original publication date, 1755. The copy reproduced is in the Library of Congress, but a line along the boundary of Maine has been added which is not on the original map.

Copies of Mitchell's map were used at different stages of the negotiations in Paris between the American and British framers of the peace treaties of 1782–83.

John Adams wrote regarding these maps:

> We had before us, through the whole negotiations, a variety of maps; but it was the Mitchell's map upon which was marked out the whole boundary lines of the United States.

No particular copy has so far been identified as the one thus referred to.

A copy of the Mitchell map used by John Jay, one of the American commissioners, on which a red line was drawn to indicate one of he preliminary boundary proposals, is now in the library of the New York Historical Society.

In the British Museum there is a heavily annotated copy of Mitchell's map that has on it a red boundary line, which differs from hat on the Jay copy.[77]

The Library of Congress has many copies of the Mitchell map esides those published in England, including 7 French, 2 Dutch, Italian, and 2 Spanish issues, as well as 40 or more reproductions f portions of the map.

Although there are many errors in this map, in 1782–83 it was he best available. A recent writer (Lawrence Martin) stated, "It ppears to be the most important map in American history."[78]

ADDITIONS TO THE TERRITORY OF THE UNITED STATES[79]

LOUISIANA PURCHASE

The entire basin of the Mississippi and its tributaries, with much f the coast region of the Gulf of Mexico, which was subsequently nown as the Territory of Louisiana, was originally claimed by La Salle[80] in 1682 for France by virtue of discovery and occupation. See pl. 4 for routes followed by La Salle and others between the Great Lakes and the Gulf of Mexico; also see figs. 2 and 18.)

The area claimed on the Gulf extended west and south to the nouth of the "Rio de las Palmas," which is probably the Texas tream now known as the Rio Grande.

In 1712 France made a grant to Antoine de Crozat of the exclusive ight to the trade of this region. As this grant gives the limits f this vast region as they were understood by France, a portion of t is here quoted:

> We have by these presents signed with our hand, authorized, and do authorize he said Sieur Crozat to carry on exclusively the trade in all the territories by s possessed, and bounded by New Mexico and by those of the English in

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[77] See reference to the red-line map in Moore, J. B., op. cit., pp. 154, 161.

[78] See Mills, D. A., United Empire (journal of the Royal Colonial Institute, London), ew ser., vol. 2, pp. 698–700, October, 1911, for description of some of the copies of the itchell map. For descriptions of still other copies see annual reports of the Librarian Congress for 1926, pp. 107–109, 119, 121, 122; for 1927, pp. 90–91; for 1929, pp. 36, 151. See also Martin, Lawrence, Noteworthy maps (Library of Congress publicaon) for 1927, pp. 20–22; for 1929, pp. 17–21. The same author has in preparation a ook entitled "Mitchell's map," from which many of the foregoing facts have been tained.

[79] Mowry, W. A., op. cit., chs. 2 to 11. Gives an excellent presentation of this subject, ith numerous references.

[80] For a translation of La Salle's proclamation, see Sparks, Jared, Library of American ography, vol. 11, pp. 201–202, Boston, 1847. For reference to the location of the o de las Palmas, see The journey of Alvar Núñez Cabeza de Vaca, translation by Fanny andelier, p. 42, Boston, 1922.

Carolina, all the establishments, ports, harbors, rivers, and especially the port and harbor of Dauphin Island, formerly called Massacre Island, the river St. Louis, formerly called the Mississippi, from the seashore to the Illinois, together with the river St. Philip, formerly called the Missouries River, and the St. Jerome, formerly called the Wabash [the Ohio], with all the countries, territories, lakes in the land, and the rivers emptying directly or indirectly into that part of the river St. Louis. All the said territories, countries, rivers, streams, and islands we will to be and remain comprised under the name of the government of Louisiana, which shall be dependent on the General Government of New France and remain subordinate to it, and we will, moreover, that all the territories which we possess on this side of the Illinois be united, as far as need be, to the General Government of New France and form a part thereof, reserving to ourself, nevertheless, to increase, if we judge proper, the extent of the government of the said country of Louisiana.

From this it appears that Louisiana was regarded by France as comprising the drainage basin of the Mississippi at least as far north as the mouth of the Illinois, with those of all its branches that enter it below this point, including the Missouri, but excluding land in the Southwest claimed by Spain. It is, moreover, certain that the area now comprised in Washington, Oregon, and Idaho was not included. Crozat surrendered this grant in 1717.

On November 3, 1762, France by a secret treaty ceded this region to Spain, defining it only as "the country known by the name of Louisiana," but Spain did not take possession until several years later. By the treaty of peace of 1763 between Great Britain, France, and Spain, the western boundary of the British possessions in the New World was placed in the center of the Mississippi River, thus reducing the area of Louisiana by the portion east of the river. By these two treaties France disposed of her possessions in North America, dividing them between Great Britain and Spain. The limit set between the British and Spanish possessions was given as the Mississippi, the Iberville, and Lakes Maurepas and Pontchartrain. (See fig. 12.) The Iberville River is now called Bayou Manchac. In the early days there was a connected waterway (now closed) through this river between the Mississippi and the Gulf of Mexico. The island thus formed was called the island of New Orleans.

Great Britain then subdivided her newly acquired province, Florida. The area south of latitude 31° (changed in 1764 to a parallel through the mouth of the Yazoo River, 32° 28′ approximately) and west of the Apalachicola River was called West Florida; the region east thereof and south of the present north boundary of Florida received the name of East Florida. For the next 16 years these boundaries and names remained undisturbed. In 1783, by the treaty of peace with the United States at the end of the Revolution, Great Britain reduced the area of West Florida by the cession of that portion north of the 31st parallel to the United States. In the same year she gave East Florida and what remained of West Florida to Spain, and in Spain's possession they remained for several years, but after 1803 the United States also claimed the area west of the Perdido River as part of the Louisiana Purchase. The treaty of 1819[81] put an end to the disputes.

Meantime, in 1800, by the secret treaty of San Ildefonso, Spain promised to return Louisiana to France. In the language of the treaty, she pledged herself to return to France "the colony and province of Louisiana, in the same extent it now has under the dominion of Spain and of other States."[82]

Immediately after this transfer became known (November, 1802) measures were set on foot by President Jefferson for obtaining free access to the sea by way of the Mississippi River. Circumstances favored this negotiation. Bonaparte was at that time in almost daily expectation of a declaration of war by Great Britain, the first act of which would be to seize the mouth of the Mississippi and with it the Province of Louisiana. Under these circumstances Bonaparte offered to sell the Province to the United States, and the offer was promptly accepted.[83] The consideration named was 60,000,000 francs and the assumption by the United States of the "French spoliation claims," which were estimated to amount to $3,750,000. Article III of the treaty of cession, dated April 30, 1803, fixed the rate of exchange at 5.3333 francs to $1. The total payments made by the United States on account of this purchase, including interest, amount to $23,213,567.73. Opponents of this purchase strongly urged that it was contrary to the Constitution of the United States.[84]

The treaty of cession[85] describes the territory only as being the same as that ceded by Spain to France by the treaty of San Ildefonso, from which the description was quoted. From this it appears that the territory sold comprised that part of the drainage basin of the Mississippi which lies west of the course of the river. (See fig. 2.) The claim of the United States to the area now comprised in Oregon, Washington, and Idaho in the negotiations with Great Britain regarding the northwestern boundary was ostensibly based not only upon prior occupation and upon purchase from Spain but also upon the alleged fact that this area formed part of the Louisiana Purchase. That this claim was baseless is shown not only by what has been already detailed regarding the limits of the purchase but also by the direct testimony of the French plenipotentiary, M. Barbé-Marbois. Some 20 years after the purchase he published a book on Louisiana,[86] in which he described at some length the negotiations that preceded the purchase and, referring to this question, said: "The shores of the western ocean were certainly not comprised in the cession, but already the United States are established there."

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[81] Malloy, W. M., op. cit., vol. 2, p. 1651. See also Cox, I. J., The West Florida controversy, 1798–1813, Baltimore, Johns Hopkins Press, 1918.

[82] 25th Cong., 2d sess., H. Rept. 818, p. 27, 1838. See p. 69 for the cession of 1762 from France to Spain.

[83] For copies of correspondence between the United States and various foreign officials, of dates from 1803 to 1807, relating to this purchase, its boundaries, etc., see Robertson, J. A., Louisiana under the rule of Spain, France, and the United States, vol. 2, Cleveland, 1911. See also State papers and correspondence bearing upon the purchase of the Territory of Louisiana: 57th Cong., 2d sess., H. Doc. 431, 1903. Marshall, T. M., A history of the western boundary of the Louisiana Purchase, 1819–1841: California Univ. Pub. History, vol. 2, pp. 46–85, 1914. On pp. 242–251 of Marshall's book there is a bibliography of publications relating to the Louisiana Purchase.

[84] See Brown, E. S., The constitutional history of the Louisiana Purchase: California Univ. Pub. History, vol. 10, Berkeley, 1920. See also Baldwin, S. E., The historic policy of the United States as to annexation: Am. Hist. Assoc. Rept. for 1893 (53d Cong., 2d sess., S. Misc. Doc. 104), pp. 369–389, 1894.

[85] Malloy, W. M., op. cit., vol. 1, p. 508.

There is also in Barbé-Marbois's book a map (dated 1829) of the country between the Mississippi and the Pacific, on which the western extent of Louisiana is indicated as the 110th meridian, which is not far from the western limit of the drainage basin of the Mississippi in Wyoming and Montana. That part of the country now comprised in Oregon, Washington, and Idaho, which, it has been claimed, formed part of the purchase, bears the following legend: "Territories and countries occupied by the United States, following the treaty of cession of Louisiana."

From this it appears that although the United States certainly did not purchase Oregon as a part of Louisiana, it is no less certain that that great area west of the Rocky Mountains fell into its hands as a direct consequence of the Louisiana Purchase.[87]

The claim made by the United States to the territory between the Mississippi and the Rio Grande as part of the Louisiana Purchase was based principally on the settlement made by La Salle at San Bernardo [now Matagorda] Bay, Tex. (see pl. 4), in 1685,[88] and on numerous maps that indicated the area as part of the French possessions, but this claim was not recognized by Spain and the boundary west of the Mississippi River was undetermined until it was fixed at the Sabine River by the treaty of 1819.

The treaty of 1783 with Great Britain describes the northern boundary of the United States in part as follows: From the northwesternmost point of the Lake of the Woods "on a due west course to the River Mississippi." The fact that such a line could not intersect the Mississippi proper at any point (see fig. 18) gave rise to many and serious disputes, which were not settled until after the date of the Louisiana Purchase. This clause of the treaty was understood by some geographers as placing the boundary line on the Lake of the Woods parallel for some 400 miles west from the lake to the point where it intersects the Missouri-Mississippi drainage basin, which in 1783 belonged to Spain, thus including the southern part of the basin of the Red River as United States territory. Other geographers who had given the subject careful study believed that the possessions of the United States in the northwest as defined by the treaty of 1783 were limited by the Mississippi River and a line extending north from its source (Lake Itasca[89]) to an intersection with the Lake of the Woods parallel. (See p. 33.)

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[86] Barbé-Marbois, François de, The history of Louisiana, etc. (translation), Philadelphia, Carey & Son, 1830.

[87] See Mowry, W. A., op. cit., pp. 131–157.

[88] See Bancroft, H. H., Works, vol. 16, p. 46, San Francisco, 1889.

Still others considered the Red River Basin south of the 49th parallel to be a part of the Louisiana Purchase. The Red River Basin was not a part of La Salle's original claim, but it appears to have been occupied by the French earlier than 1762. In the Encyclopædia Britannica (13th ed., vol. 4, p. 705) it is stated that La Vérendrye, a French Canadian, was the first white man of record to explore the country from the site of Winnipeg westward to the Rocky Mountains. (See pl. 4.)

The treaty of 1763 between Great Britain, France, and Spain limited Great Britain's jurisdiction on the northwest by the Mississippi River, as will be seen from the following quotation from Article VII:

> In order to re-establish peace on solid and durable foundations, and to remove for ever all subject of dispute with regard to the limits of the British and French territories on the continent of America; it is agreed, that, for the future, the confines between the dominions of his Britannic Majesty, and those of his most Christian Majesty, in that part of the world, shall be fixed irrevocably by a line drawn along the middle of the River Mississippi, from its source to the River Iberville.

When this treaty was made Great Britain apparently knew nothing of the secret treaty of the preceding year whereby France had ceded the Louisiana territory to Spain. It is evident, however, that Great Britain intended to relinquish all claim to jurisdiction over the area west of the Mississippi. In 1763 and for many years thereafter the Mississippi was believed to rise considerably north of its actual known source. On the Mitchell map (pl. 5) the source was said to be at about the "50th degree of latitude." Even if the area assigned to France did not extend as far north as latitude 50° it apparently included all that part of the Red River drainage basin west of the actual source of the Mississippi.

The British act of 1774 extended the Province of Quebec to include the area west of Pennsylvania north of the Ohio River and east of the Mississippi. The boundaries were more definitely described in the commission issued to the governor in December of the same year, in part as follows:

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[89] See Baker, J. H., Minnesota Hist. Coll., vol. 6, pt. 1, 1887; also Brower, J. V., dem, vol. 7, 1893. Lake Itasca is generally referred to as the source of the Mississippi, ut a creek about 4 miles in length that empties into the southern part of the lake has source more than 100 feet above the lake. Lake Itasca is about 3½ miles in length. he name Itasca was coined by Schoolcraft in 1832 from parts of two Latin words, *eritas* (truth) and *caput* (head), three letters from each word being omitted.

> and along the bank of the said river [Ohio] westward to the banks of the Mississippi, and northward along the eastern bank of the said river to the southern boundary of the territory granted to the Merchant Adventurers of England trading to Hudson's Bay.

The Canadian General Government and the Province of Ontario have made extensive researches concerning the western boundary of Ontario, and the reports give an excellent historical review of the French, Spanish, and English claims to the country about the Lake of the Woods, including the Red River and Mississippi River drainage basins, from the first exploration down to 1818 and later. The reports fill several large volumes, and among them may be mentioned "Report of the select committee on the boundaries between the Province of Ontario and the unorganized territories of the Dominion," Ottawa, 1880, and "Correspondence, papers, and documents * * * relating to the northerly and westerly boundaries of Ontario," Toronto, 1882. A careful examination of these and other official documents fails to disclose any statement of claims by Great Britain to the area west of the Mississippi east of the Rocky Mountains and south of the Lake of the Woods parallel.

The commissioner for Ontario, in reporting to the lieutenant governor of that Province with reference to the boundary of Ontario, stated (p. 340 of the 1880 report) that

> In framing the treaty of Paris a few years later [1782] the Imperial Government recognized the Mississippi as an existing territorial boundary. All the country east of that river and south of a line drawn through the middle of the Great Lakes to the most northwestern point of the Lake of the Woods was surrendered to the United States. All the country west of the Mississippi, extending south to 31° of north latitude and east to the Atlantic Ocean, was left to its former owners [Spain].

On the Faden map of 1783[90] a heavy green line is drawn from the head of the Mississippi River to the Lake of the Woods. The boundary of the Hudson Bay territory, as fixed by the treaty of Utrecht, is indicated by a red line running east and west from the Lake of the Woods. West of the green line, west of the Mississippi River and south of the red line, the area is marked "Louisiana," and in its northern part a river running northward is marked "Mississippi or Red River." If the evidence of this map may be accepted, the Red River area south of the Lake of the Woods parallel was considered a part of Louisiana.

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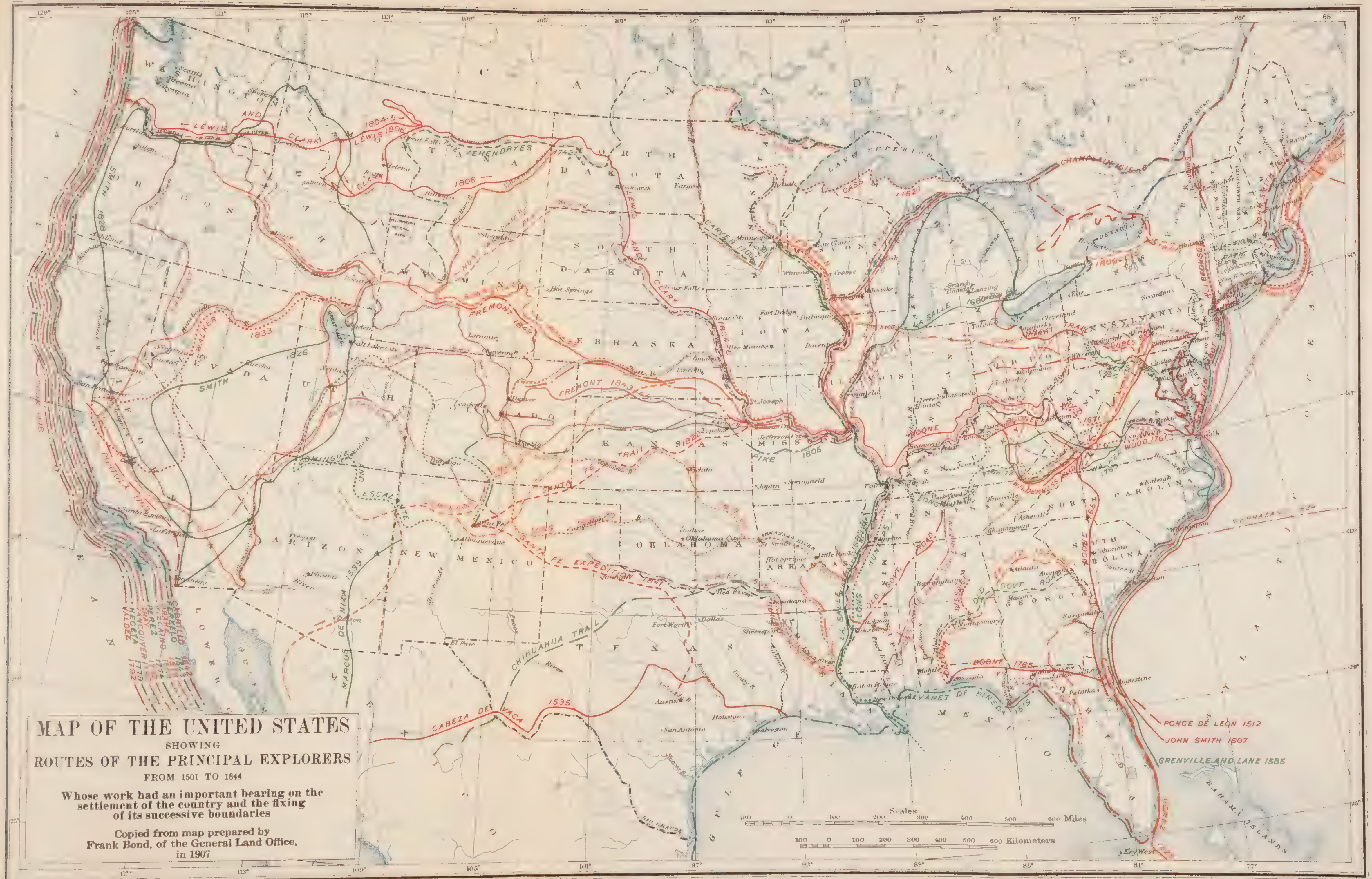
[90] The United States of North America, with British and Spanish territories according to the treaty; engraved by William Faden, 1783. Faden was in June, 1783, appointed geographer to the King.


LEWIS AND CLARK 1804-5
LEWIS 1806
CLARK 1806
THE VERENDRYES 1742
FREMONT 1842
FREMONT 1843-44
WALKER 1833
SMITH 1826
SMITH 1828
HUNT
PORTOLA 1769
DOMINGUEZ AND ESCALANTE
MARCOS DE NIZA 1539
CABEZA DE VACA 1535
CHIHUAHUA TRAIL
SANTA FE TRAIL 1822
SANTA FE EXPEDITION 1841
PIKE 1806
CARVER 1766
CASS 1820
CHAMPLAIN 1615-16
LA SALLE 1680
BOONE
WILDERNESS ROAD
WALKER 1750
WOOD 1671
BOONE 1765
ALVAREZ DE PINEDA 1519
VERRAZANO
CABRILLO
FERRELO
DRAKE
VIZCAINO
PEREZ
VANCOUVER 1792
HECETA
VALDEZ
PONCE DE LEON 1512
JOHN SMITH 1607
GRENVILLE AND LANE 1585
Scales
100 0 100 200 300 400 500 600 Miles
100 0 100 200 300 400 500 600 Kilometers

MAP OF THE UNITED STATES
SHOWING
ROUTES OF THE PRINCIPAL EXPLORERS
FROM 1501 TO 1844

Whose work had an important bearing on the settlement of the country and the fixing of its successive boundaries

Copied from map prepared by
Frank Bond, of the General Land Office,
in 1907

ENGRAVED AND PRINTED BY THE U.S. GEOLOGICAL SURVEY

In the printed "Observations" that accompany this map are the following:

> The River Mississippi is known about 60 miles above the Falls of St. Anthony but is not navigable; its source is supposed by all travellers to be in about 46° N., therefore the line to be drawn W. from the Lake of the Woods ill it strikes Mississippi will probably run on a parallel 3 degrees or 180 miles above its source.
>
> But this boundary line, otherwise insignificant, seems to have been extended o the Lake of the Woods in 49° N. to approximate the United States to the boundary of the Hudson's Bay Company, in 49° N.
>
> A south line should have been drawn from the Lake of the Woods to strike the Mississippi, as the west line beginning at 180 miles distance, if extended, would increase its distance from that river.

The map illustrating the route of the Lewis and Clark expedition of 1804–1806, "from the original drawing by Wm. Clark," shows the boundary of Louisiana as including the drainage basin of the Missouri River north of the 49th parallel, and near the north end of the Lake of the Woods there is this note: "Northern boundary of the United States, lat. 49° 37′ N."

It seems probable that Congress considered the Red River Basin (see fig. 18) as far north as the Lake of the Woods to be a part of the Louisiana Purchase, but no specific reference was made to it n any statute prior to 1834.

There were many who believed that the Louisiana Purchase extended even farther north than the 49th parallel and included the entire drainage basin of Missouri River. This uncertainty was settled by the treaty of 1818. James White,[91] after an extended review of this question, states: "The true northern boundary of Louisiana was the watershed of the Mississippi and Missouri Rivers." The approximate area of this "watershed" north of the 49th parallel is 12,300 square miles.

The Melish map, referred to in the treaty with Spain of 1819 (see p. 36), but printed before the convention with Great Britain of 1818 (see p. 13) was signed, shows the boundary line of the United States as running due west from the northwesternmost point of the Lake of the Woods to the Red River, thence up that river to the Assiniboine, up that river, and by an irregular line westward so as to include the Missouri River drainage basin north of the 49th parallel.

This question is now a matter of historical interest only, for the boundary line was definitely fixed by the British treaty of 1818 (p. 13).

It has often been said that by the treaty of Utrecht[92] of 1713 the 49th parallel was made the boundary line between Great Britain and the French Province of Louisiana, but a careful reading of the treaty fails to disclose any ground for this statement. It is doubtless true that during the negotiations which followed the signing of the treaty the British commission endeavored to have the 49th parallel fixed as the boundary and that the French commission contended for a boundary a degree or more farther north, but the commissioners failed to agree, and no latitude was mentioned in the treaty. Article X of this treaty provided for the appointment of "commissaries" to fix a boundary line between the Hudson Bay territory and the Louisiana territory. The "commissaries" were probably appointed, but no final decision resulted from their labors.[93]

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[91] Canada and its provinces, p. 842, Toronto, 1914.

[92] There are several printed copies of the treaty of Utrecht in the Library of Congress. ee also Freschot, C., The compleat history of the treaty of Utrecht [etc.], 2 vols., London, A. Roper and S. Butler, 1715.

The western boundary of the Louisiana Purchase is the western boundary of the Mississippi drainage basin as claimed by La Salle. However the northern and northeastern boundaries of the Lousiana Purchase may be considered, there is no doubt that they included the drainage basin of the Missouri south of the 49th parallel and the western drainage basin of the Mississippi from its source to the Gulf.

FLORIDA PURCHASE [94]

The second addition to the territory of the United States consisted of the Floridas, ceded by Spain in 1819 in exchange for large areas west of the Mississippi River relinquished by the United States to Spain and the assumption by the United States of all claims of its citizens against Spain for damages received, to an amount not exceeding $5,000,000, Spain likewise assuming responsibility for claims of its citizens against the United States.

From the date of the Louisiana Purchase, in 1803, the territory bounded by the Mississippi River on the west, the Perdido on the east, the parallel of 31° on the north, and the Gulf of Mexico on the south, known as West Florida, had been in dispute between the two countries. During at least part of this time it had been practically in the possession of the United States. The clause from the treaty of San Ildefonso quoted on page 29 was interpreted by Jefferson and others in this country to mean the inclusion of West Florida. Their reasoning was this: In 1800 Spain owned West Florida; West Florida was once a part of Louisiana; in 1800 Spain receded Louisiana to France; she therefore receded West Florida with it.

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[93] See Hermann, Binger, The Louisiana Purchase and our title west of the Rocky Mountains [etc.], pp. 55–59, Washington, 1900; also Bond, Frank, Historical sketch of Louisiana and the Louisiana Purchase, Washington, 1912.

[94] For a historical sketch of the Florida Purchase and of events leading to its acquisition see Hinsdale, B. A., The establishment of the first southern boundary of the United States: Am. Hist. Assoc. Ann. Rept. for 1893 (53d Cong., 2d sess., S. Misc. Doc. 104), pp. 330–366, 1893; also Mowry, W. A., op. cit., ch. 4.

Spain, however, held that this was merely a treaty of recession, by which she gave back to France what France had given to her in 1762. As in 1762 she did not own West Florida, she could not have receded it to France. Barbé-Marbois, the French plenipotentiary, was very positive in stating that West Florida formed no part of the Louisiana Purchase, and that the southeastern boundary of that purchase consisted of the Iberville River and Lakes Maurepas and Pontchartrain. (See fig. 12.)

Immediately after the Louisiana Purchase was acquired the claim was made by the United States that it included most of West Florida and part of the Texas coast, but this claim was not entertained by Spain. In 1810 a revolution was effected in that part of West Florida lying west of the Pearl River, and application was made by the inhabitants for annexation to the United States. The governor of Louisiana, under instructions from Washington, at once took possession. Immediately a counter revolution was organized against him, but it was put down by force of arms, and in 1812 this part of West Florida was annexed to the Territory of Louisiana.[95] In the meantime the insurrection spread eastward and, although put down by the Spanish authorities, the movement received the sympathy of the United States, and Congress passed an act, approved January 15, 1811,[96] authorizing the President, under certain specified contingencies, to use force in taking possession of East Florida and appropriating $100,000 for carrying the act into effect.[97] In 1812 that portion of West Florida lying between the Perdido and Pearl Rivers was annexed to the Territory of Mississippi. (See p. 164.)

The treaty of February 22, 1819, with Spain settled these conflicting claims [98] by the following clause: [1]

> Article II. His Catholic Majesty cedes to the United States, in full property and sovereignty, all the territories which belong to him, situated to the eastward of the Mississippi, known by the name of East and West Florida. The adjacent islands dependent on said province * * * are included in this article.

The third article in this treaty defines the boundary between the United States and the Spanish possessions in the Southwest as follows:

> Article III. The boundary line between the two countries, west of the Mississippi, shall begin on the Gulph of Mexico, at the mouth of the river Sabine, in

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[95] 2 Stat. L. 708.

[96] 3 Stat. L. 471.

[97] The publication of this act before the end of the following session of Congress was forbidden by act of March 3, 1811 (3 Stat. L. 472).

[98] For reference to the East Florida and West Florida boundary disputes see Cox, I. J., The West Florida controversy, 1798–1813, Baltimore, Johns Hopkins Press, 1918; and Paxson, F. L., History of the American frontier, 1763–1893, ch. 16, Cambridge, 1924.

[1] Malloy, W. M., op. cit., vol. 2, p. 1652. For a sketch of events leading up to this treaty, see Marshall, T. M., op. cit., pp. 46–85.

the sea, continuing north, along the western bank of that river, to the 32nd degree of latitude; thence, by a line due north to the degree of latitude where it strikes the Rio Roxo of Nachitoches, or Red River; then following the course of the Rio Roxo westward, to the degree of longitude 100 west from London,[2] and 23 from Washington; then, crossing the said Red River and running thence, by a line due north, to the river Arkansas; thence, following the course of the southern bank of the Arkansas, to its source in latitude 42 north; and thence, by that parallel of latitude to the South Sea. The whole being as laid down in Melish's map of the United States, published at Philadelphia, improved to the 1st of January, 1818. But if the source of the Arkansas River shall be found to fall north or south of latitude 42, then the line shall run from the said source due south or north, as the case may be, till it meets the said parallel of latitude 42, and thence, along the said parallel, to the South Sea: All the islands in the Sabine, and the said Red and Arkansas Rivers, throughout the course thus described, to belong to the United States; but the use of the waters, and the navigation of the Sabine to the sea, and of the said rivers Roxo and Arkansas, throughout the extent of the said boundary, on their respective banks, shall be common to the respective inhabitants of both nations.

This treaty was ratified promptly by the United States Senate, but Spain did not ratify it until October 20, 1820, which was after the time allowed for ratification had expired. The United States Senate again ratified it February 19, 1821, and it was proclaimed by the President February 22, 1821.

The western boundary of the United States south of latitude 42° as fixed by this treaty was confirmed by Mexico by treaty concluded January 12, 1828,[3] Mexico having in the meantime gained her independence from Spain.

TEXAS ACCESSION

The next acquisition of territory was that of the Republic of Texas, which was admitted as a State by joint resolution of December 29, 1845.[4] The area which Texas brought into the Union was limited as follows, as defined by the Republic of Texas, December 19, 1836[5] (see fig. 14):

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[2] The zero point of the London meridian is the cross on St. Paul's Cathedral in London, which is 0° 05′ 48.356″ (4.17 miles) west of Greenwich (Ordnance Survey of Great Britain, letter of Sept. 6, 1927). For reference to the establishment of the meridians of London and Greenwich see The Mariner's Mirror, vol. 13, No. 2, London, Cambridge Press, April, 1927. Longitudes on the Mitchell map of 1755 (see p. 26) are referred to the London meridian. The Melish map of 1818 has the degrees west of London indicated along the lower edge, and the degrees west of Washington near the upper edge; the 0° of the Washington meridian coincides with 77° west of London. In 1804 a line through the center of the White House was run out and marked for the zero of the Washington meridian. This line is 76° 56′ 25″ west of London. It will be seen from these statements that the location of this boundary was somewhat uncertain, but the position was recognized as the 100th degree west of Greenwich in acts of Sept. 9, 1850, and June 5, 1858. (See p. 171.)

[3] Malloy, W. M., op. cit., vol. 1, p. 1082.

[4] 9 Stat. L. 108. For reference to efforts made by the United States to acquire Texas between 1829 and 1835 by purchase or otherwise, see Marshall, T. M., A history of the western boundary of the Louisiana Purchase: California Univ. Pub. History, vol. 2, pp. 86–112, 1914.

[5] Laws of the Republic of Texas, vol. 1, p. 133, Houston, 1838.

Beginning at the mouth of the Sabine River and running west along the Gulf of Mexico three leagues from land to the mouth of the Rio Grande, thence up the principal stream of said river to its source, thence due north to the forty-second degree of north latitude, thence along the boundary line as defined in the treaty between Spain and the United States to the beginning.

The claim by Texas to land north to the 42d parallel and west and south to the Rio Grande was based in part on a secret treaty between President Santa Anna of Mexico and officers of the Texas army at the end of the war between Mexico and Texas in 1836.

FIRST MEXICAN CESSION

In 1848 the treaty of Guadalupe-Hidalgo added to the country the area of California, Nevada, Utah, and parts of Colorado, Arizona, and New Mexico. (See fig. 2.) This treaty was concluded February 2, 1848, and proclaimed July 4, 1848. The clauses in it defining our acquisition of territory are as follows:[6]

ARTICLE V. The boundary line between the two Republics shall commence in the Gulf of Mexico, three leagues from land, opposite the mouth of the Rio Grande, otherwise called the Rio Bravo del Norte, or opposite the mouth of its deepest branch, if it should have more than one branch emptying directly into the sea; from thence up the middle of that river, following the deepest channel where it has more than one, to the point where it strikes the southern boundary of New Mexico; thence, westwardly, along the whole southern boundary of New Mexico (which runs north of the town called Paso) to its western termination; thence, northward, along the western line of New Mexico, until it intersects the first branch of the river Gila; (or if it should not intersect any branch of that river, then to the point on the said line nearest to such branch, and thence in a direct line to the same;) thence down the middle of the said branch and of the said river, until it empties into the Rio Colorado; thence across the Rio Colorado, following the division line between Upper and Lower California, to the Pacific Ocean.

The southern and western limits of New Mexico, mentioned in this article, are those laid down in the map entitled "Map of the United Mexican States, as organized and defined by various acts of the Congress of said republic, and constructed according to the best authorities. Revised edition. Published at New York in 1847, by J. Disturnell;" [see pl. 6] of which map a copy is added to this treaty, bearing the signatures and seals of the undersigned Plenipotentiaries. And in order to preclude all difficulty in tracing upon the ground the limit separating Upper from Lower California, it is agreed that the said limit shall consist of a straight line drawn from the middle of the Rio Gila, where it unites with the Colorado, to a point on the coast of the Pacific Ocean, distant one marine league due south of the southernmost point of the port of San Diego, according to the plan of said port made in the year 1782 by Don Juan Pantoja, second sailing-master of the Spanish fleet, and published at Madrid in the year 1802, in the atlas to the voyage of the schooners Sutil and Mexicana; of which plan a copy is hereunto added, signed, and sealed by the respective plenipotentiaries.

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[6] Malloy, W. M., op. cit., vol. 1, p. 1109.

For this vast territory the United States agreed to pay $15,000,000, of which $3,000,000 was to be paid when the treaty was ratified and the remainder in annual installments of $3,000,000 each, with interest at 6 per cent. Besides this, the United States assumed the liability for certain claims against Mexico, not to exceed a total of $3,250,000.

Much difficulty followed in the interpretation of this treaty. A joint commission of the two Governments was formed, consisting of a commissioner and a chief surveyor from each. They were instructed that any decision upon the interpretation of the treaty must be agreed to unanimously.

Under the direction of the commissioners the initial point of the boundary between Upper and Lower California was established on the Pacific coast and marked by a substantial monument. A similar determination was made at the eastern extremity of this line, at the junction of Gila and Colorado rivers, where another monument was placed. Between these the line was run and marked with five intermediate monuments.

The most important question that came before the commission for decision concerned the location and extent of the south boundary of New Mexico. Here, unfortunately, the Disturnell map left room for broad differences of opinion. The town called Paso (now named Juarez) was located on the map more than half a degree too far north and nearly 2° too far east. In the absence of the chief surveyor for the United States the three other members of the commission agreed to accept the position of the south boundary of New Mexico as shown by the projection lines on the map (latitude 32° 22′); to run a line in that latitude 3° west from the Rio Grande and thence north until a branch of the Gila River was intersected. In accordance with this decision a durable monument was erected on the bank of the Rio Grande, in latitude 32° 22′, and the running of the line westward was begun. (See fig. 22.) After 1½° had been run the chief surveyor for the United States arrived, learned what had been done, and made a vigorous protest against this interpretation of the map. This protest caused the sudden stoppage of the work of running the line and the repudiation of the agreement by the United States Government. The United States claimed that the boundary should be located with reference to the town of Paso—the only definite point for it named in the treaty. Under this claim, according to later observations, the south boundary of New Mexico would be placed at about latitude 31° 52′, and it would extend west to longitude 109° 30′. Negotiations followed, but no agreement had been reached before 1853, when the Gadsden Purchase made further discussion unnecessary.

GADSDEN PURCHASE

On December 30, 1853, a second purchase was made from Mexico consisting of a strip of land lying south of the Gila River in New Mexico and Arizona, the consideration being $10,000,000 in gold. This is known as the Gadsden Purchase, from the name of the United States commissioner, James Gadsden.[7] The boundaries as established are as follows [8] (see figs. 2 and 22):

> ARTICLE I. The Mexican Republic agrees to designate the following as her true limits with the United States for the future: Retaining the same dividing line between the two Californias as already defined and established, according to the 5th article of the treaty of Guadalupe Hidalgo, the limits between the two republics shall be as follows: Beginning in the Gulf of Mexico, three leagues from land, opposite the mouth of the Rio Grande, as provided in the fifth article of the treaty of Guadalupe Hidalgo; thence, as defined in the said article, up the middle of that river to the point where the parallel of 31° 47′ north latitude crosses the same; thence due west one hundred miles; thence south to the parallel of 31° 20′ north latitude; thence along the said parallel of 31° 20′ to the 111th meridian of longitude west of Greenwich; thence in a straight line to a point on the Colorado River twenty English miles below the junction of the Gila and Colorado Rivers; thence up the middle of the said river Colorado until it intersects the present line between the United States and Mexico.

In the year following a commission was appointed for surveying nd marking this line, under the United States commissioner, Maj. W. H. Emory. The line was run and marked in the year 1855, and the report [9] was transmitted in the following year.

As settlement increased in the territory which this line traverses, it became evident that the line was insufficiently marked. Some of the monuments had disappeared, and there were many great areas of country in which no monuments had ever been placed, so that the necessity of rerunning and marking the line became apparent. For this purpose a commission was created in 1891, under which the line was recovered from the original monuments, as far as possible, and between these monuments was rerun and fully and durably marked. The report [10] of this commission, with maps, profiles, and illustrations of the monuments, was published in 1898. (See pl. 2.)

ALASKA PURCHASE [11]

Alaska was purchased from Russia, in accordance with a convention signed March 30, 1867, and proclaimed June 20, 1867, and was made a Territory by act of August 24, 1912.[12] The boundaries of

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[7] For references to the events which led to this purchase and a brief discussion of the boundary questions see Bancroft, H. H., Works vol. 17, pp. 491–518, 652, San Francisco, 1889.

[8] Malloy, W. M., op. cit., vol. 1, p. 1121.

[9] 34th Cong., 1st sess., H. Ex. Doc. 135, 1857.

[10] 55th Cong., 2d sess., S. Doc. 247, 1898.

[11] For a review of events leading up to this purchase see Farrar, V. J., The background of the purchase of Alaska: Washington Hist. Quart., April, 1922, p. 93; Mowry, W. A., op. cit., ch. 8.

[12] 37 Stat. L., pt. 1, p. 512.

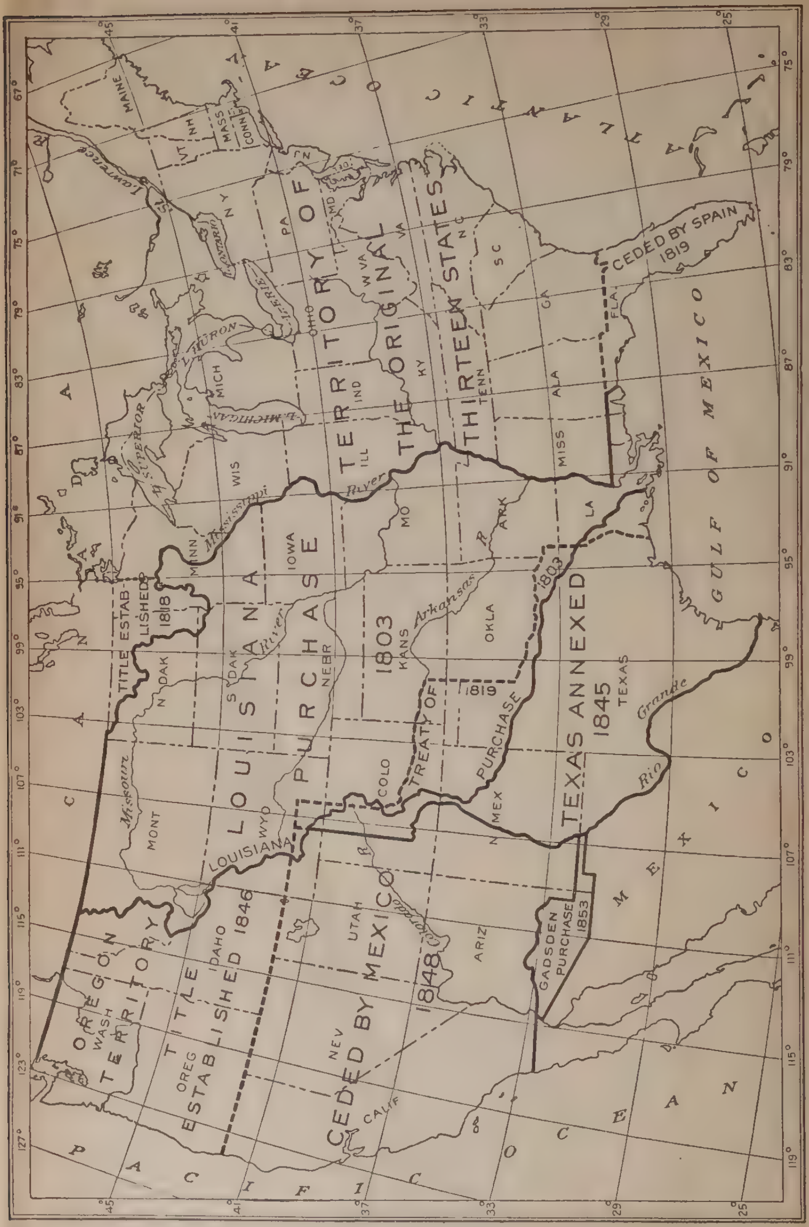

TERRITORY OF THE ORIGINAL THIRTEEN STATES
LOUISIANA PURCHASE 1803
TITLE ESTABLISHED 1818
TREATY OF 1819 PURCHASE
CEDED BY SPAIN 1819
TEXAS ANNEXED 1845
OREGON TERRITORY TITLE ESTABLISHED 1846
CEDED BY MEXICO 1848
GADSDEN PURCHASE 1853
1803
LOUISIANA
MAINE
VT
NH
MASS
CONN
NY
PA
NJ
MD
W VA
VA
N C
S C
GA
FLA
ALA
MISS
TENN
KY
OHIO
IND
ILL
MICH
WIS
MINN
IOWA
MO
ARK
LA
N DAK
S DAK
NEBR
KANS
OKLA
TEXAS
MONT
WYO
COLO
N MEX
IDAHO
UTAH
ARIZ
NEV
CALIF
WASH
OREG
CANADA
ATLANTIC OCEAN
GULF OF MEXICO
MEXICO
PACIFIC OCEAN
L. Superior
L. Michigan
L. Huron
L. Erie
L. Ontario
Lawrence
Mississippi River
Missouri River
Arkansas R.
Rio Grande
Colorado R.
45°
41°
37°
33°
29°
25°
67°
71°
75°
79°
83°
87°
91°
95°
99°
103°
107°
111°
115°
119°
123°
127°
100
0
100
300
500
700 MILES

FIGURE 2.—Map of the United States showing accessions of territory from 1803 to 1853

A. MOUNT WHITNEY, 14,496 FEET ABOVE SEA LEVEL

View from a point 3 miles northwest.

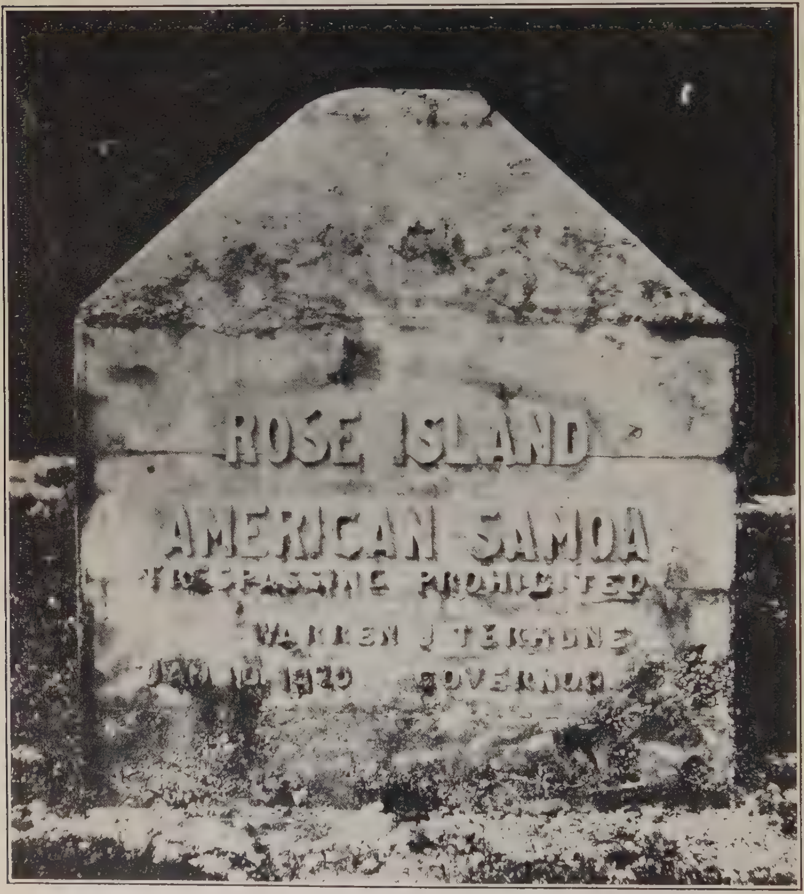
DEATH VALLEY
276 FT BELOW SEA

B. DEATH VALLEY, 276 FEET BELOW SEA LEVEL

Highest and lowest points in the United States

Both in California and but 86 miles apart.

A


ROSE ISLAND
AMERICAN SAMOA
TRESPASSING PROHIBITED
WARREN J TERHUNE
JAN 10 1920 GOVERNOR

B

NORTHERNMOST AND SOUTHERNMOST POINTS IN UNITED STATES TERRITORY

A, Point Barrow, the extreme northern part of Alaska, latitude 71° 25′ N.; *B*, Rose Island, Pacific Ocean, latitude 14° 32′ S.

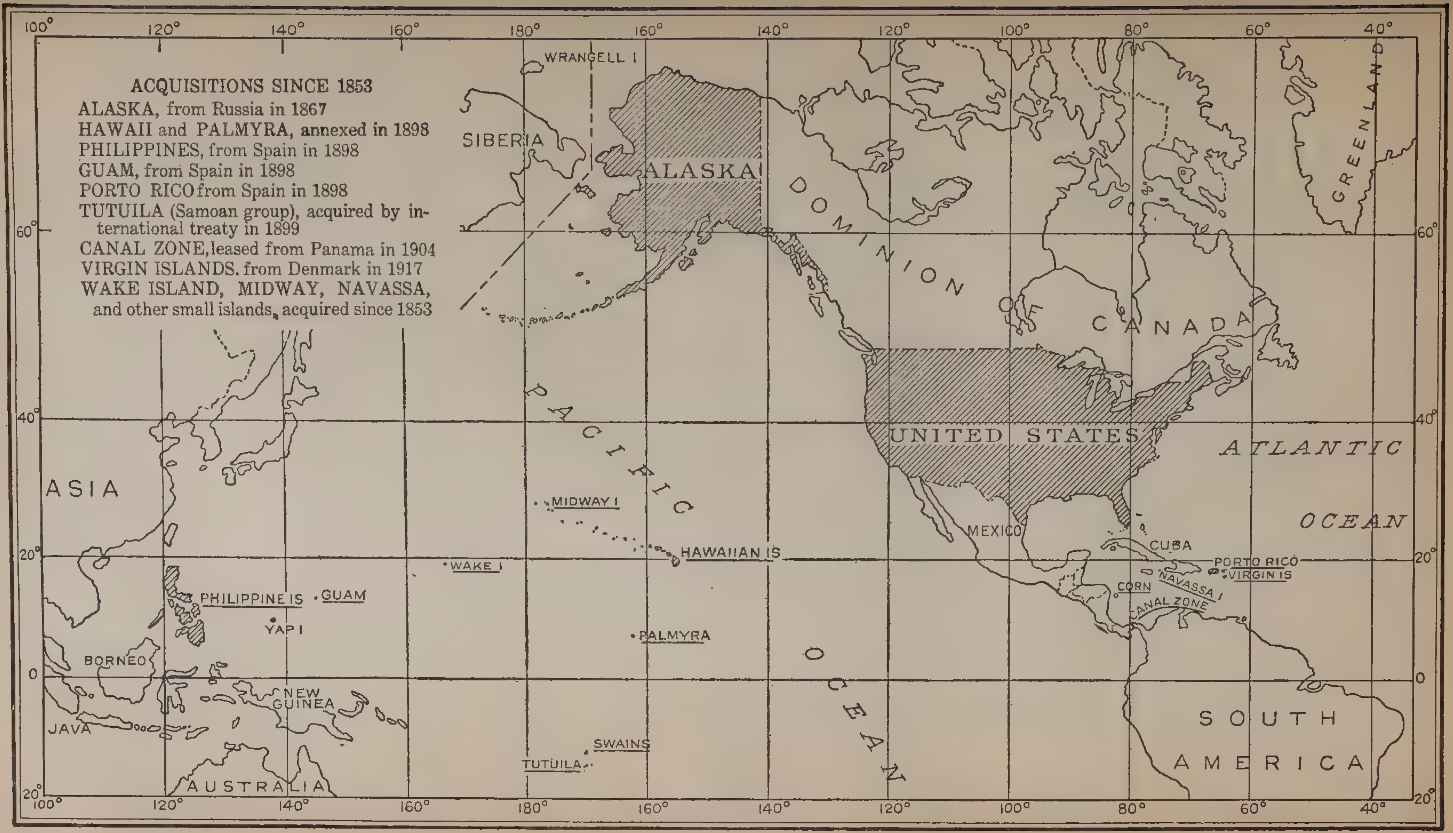

ACQUISITIONS SINCE 1853
ALASKA, from Russia in 1867
HAWAII and PALMYRA, annexed in 1898
PHILIPPINES, from Spain in 1898
GUAM, from Spain in 1898
PORTO RICO from Spain in 1898
TUTUILA (Samoan group), acquired by international treaty in 1899
CANAL ZONE, leased from Panama in 1904
VIRGIN ISLANDS. from Denmark in 1917
WAKE ISLAND, MIDWAY, NAVASSA, and other small islands, acquired since 1853
WRANGELL I
SIBERIA
ALASKA
DOMINION OF CANADA
GREENLAND
UNITED STATES
ATLANTIC OCEAN
PACIFIC OCEAN
ASIA
MEXICO
CUBA
PORTO RICO
VIRGIN IS
NAVASSA I
CORN
CANAL ZONE
SOUTH AMERICA
MIDWAY I
HAWAIIAN IS
WAKE I
PHILIPPINE IS
GUAM
YAP I
PALMYRA
BORNEO
NEW GUINEA
JAVA
SWAINS
TUTUILA
AUSTRALIA
100°
120°
140°
160°
180°
160°
140°
120°
100°
80°
60°
40°
60°
40°
20°
0
20°

FIGURE 3.—Map of the United States showing accessions of territory since 1853

Alaska are described in the accompanying extracts from the convention of 1825 between Russia and Great Britain, quoted in Article I of the convention of 1867 [13] (see figs. 3 and 4):

> Commencing from the southernmost point of the island called Prince of Wales Island, which point lies in the parallel of 54 degrees 40 minutes north latitude, and between the 131st and 133d degree of west longitude (meridian of Greenwich) the said line shall ascend to the north along the channel called Portland channel, as far as the point of the continent where it strikes the 56th degree of north latitude; from this last-mentioned point, the line of demarcation shall follow the summit of the mountains situated parallel to the coast as far as the point of intersection of the 141st degree of west longitude (of the same meridian); and finally, from the said point of intersection, the said meridian line of the 141st degree, in its prolongation as far as the Frozen ocean.
>
> IV. With reference to the line of demarcation laid down in the preceding article, it is understood
>
> 1st. That the island called Prince of Wales Island shall belong wholly to Russia, (now, by this cession, to the United States).
>
> 2d. That whenever the summit of the mountains which extend in a direction parallel to the coast from the 56th degree of north latitude to the point of intersection of the 141st degree of west longitude shall prove to be at the distance of more than ten marine leagues from the ocean, the limit between the British possessions and the line of coast which is to belong to Russia as above mentioned (that is to say, the limit to the possessions ceded by this convention) shall be formed by a line parallel to the winding of the coast, and which shall never exceed the distance of ten marine leagues therefrom.

The following paragraph is in the convention of 1867 only:

> The western limit within which the territories and dominion conveyed, are contained, passes through a point in Behring's straits on the parallel of sixty-five degrees thirty minutes north latitude, at its intersection by the meridian which passes midway between the islands of Krusenstern, or Ignalook, and the island of Ratmanoff, or Noonarbook, and proceeds due north, without limitation, into the same Frozen ocean. The same western limit, beginning at the same initial point, proceeds thence in a course nearly southwest, through Behring's straits and Behring's sea, so as to pass midway between the northwest point of the island of St. Lawrence and the southeast point of Cape Choukotski, to the meridian of one hundred and seventy-two west longitude; thence, from the intersection of that meridian, in a southwesterly direction, so as to pass midway between the island of Attou and the Copper island of the Kormandorski couplet or group in the North Pacific ocean, to the meridian of one hundred and ninety-three degrees west longitude [167° east longitude] so as to include in the territory conveyed the whole of the Aleutian islands east of that meridian.

The consideration paid for Alaska was $7,200,000 in gold.

There is no possibility of misinterpreting the language of the convention as to the portion of the boundary running along the 141st meridian, but when the wealth of the area was recognized the claims of the United States as to the location of the part of the boundary from Mount St. Elias southeastward to the mouth of Portland Canal were questioned by Canadian authorities.

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[13] Malloy, W. M., op. cit., vol. 2, p. 1521.

The coast of this part of Alaska is extremely broken, containing many fiords extending far inland, and no continuous range of mountains parallels the coast. It was for many years tacitly admitted by both sides that the second alternative of the treaty, that the boundary should be a line 10 marine leagues distant from the coast and following its windings, should be the one finally adopted when the question of marking the boundary arose. This position was taken by the United States and has been consistently held from the time of the acquisition of the territory to the present day. Many maps prepared before the dispute arose, United States and Canadian, agreed on it. Many acts of sovereignty were performed by the United States within this territory, and no question as to their validity was raised by the Canadian authorities. The discovery of gold in the basin of the Yukon in Canada, however, and the fact that the only feasible means of access to this region lay through United States territory made it extremely desirable for Canada to possess a port or ports on this coast as the starting points of routes to the Yukon mines, and it was only when this necessity appeared that a definite interpretation of the treaty was required.

The claim made by the British Government on behalf of Canada before a joint commission on the boundary in August, 1898, was that this portion of the boundary, instead of passing up Portland Canal, should pass up Pearse Canal, connecting with Portland Canal, up which it should follow to the summit of the mountains nearest to the coast, and then should follow them, regardless of the fact that they do not form a continuous range, crossing all the inlets of the sea up to Mount St. Elias. This claim was refused by the United States commissioners. A proposition made by the British commissioners to refer the matter to arbitration was also refused by the United States commissioners, on the ground that there was nothing to arbitrate, inasmuch as the territory in question was in the possession of the United States and had been for many years without dispute, such possession being in full accord with the terms of the treaty. The commission was then dissolved, the only outcome being an agreement that the summits of White and Chilkoot Passes and a point upon the Chilkat River above Pyramid Harbor were temporarily adopted as points upon the boundary.

The convention of January 24, 1903, created an Alaskan Boundary Tribunal, to consist of "six impartial jurists of repute," three to be selected by each of the two parties to the controversy, to attempt a settlement of this boundary question. The United States was represented by Messrs. Elihu Root, Henry Cabot Lodge, and George Turner. The Canadian side was represented by Baron Alverstone, lord chief justice of England, and Sir Louis A. Jetté and A. B. Aylesworth, of Canada. After argument and discussion the majority of the tribunal, consisting of Baron Alverstone and the three Americans, on October 20, 1903, agreed on a boundary which satisfied the American claims. The boundary thus adopted may be defined as follows: It commences at Cape Muzon. Thence it crosses in a straight line to the mouth of Portland Channel [Canal], this entrance being west of Wales Island, and passes up the channel to the north of Wales and Pearse Islands to the 56th parallel of latitude. Thence the line runs from one mountain summit to another, passing above the heads of all fiords. At the head of Lynn Canal it traverses White and Chilkoot Passes. Thence by a tortuous southwesterly course it reaches Mount Fairweather and thence follows the higher mountains around Yakutat Bay to Mount St. Elias.

Lack of accurate maps prevented the tribunal from describing in detail about 120 miles of this boundary, which was described as the "coast boundary," but by an exchange of notes between the two Governments amicable arrangements were made for the selection by commissioners of additional summits as boundary marks.

The survey of the coast boundary, about 892.7 miles in length, was completed in 1914. The line is marked by concrete monuments along the shores of Portland Canal, by 5-foot aluminum-bronze monuments in the valleys of streams crossed, by conical monuments on easily accessible summits (see pl. 2), and by brass bolts on peaks less easily ascended. Inaccessible mountain peaks on the line were located by triangulation. The report on the survey of the coast boundary is in preparation.

In accordance with the convention of April 21, 1906, commissioners were appointed under whose direction the 141st meridian has been established and intervisible marks placed along the line from the Arctic Ocean to Mount St. Elias, a distance of about 645 miles, the field work having been completed in 1913. The final report of the commissioners, dated December 15, 1918, was published in 1919 and is accompanied by an atlas containing 38 maps. The report is entitled "Joint report upon the survey and demarcation of the international boundary between the United States and Canada along the one hundred and forty-first meridian from the Arctic Ocean to Mount St. Elias." This report contains copies of treaties and historical data relating to the location of the boundary.[14]

By Article XXVI of the treaty between the United States and Great Britain of May 8, 1871, the navigation of the Yukon, Porcupine, and Stikine Rivers, Alaska, was declared free for the purpose of commerce to the citizens of both nations.

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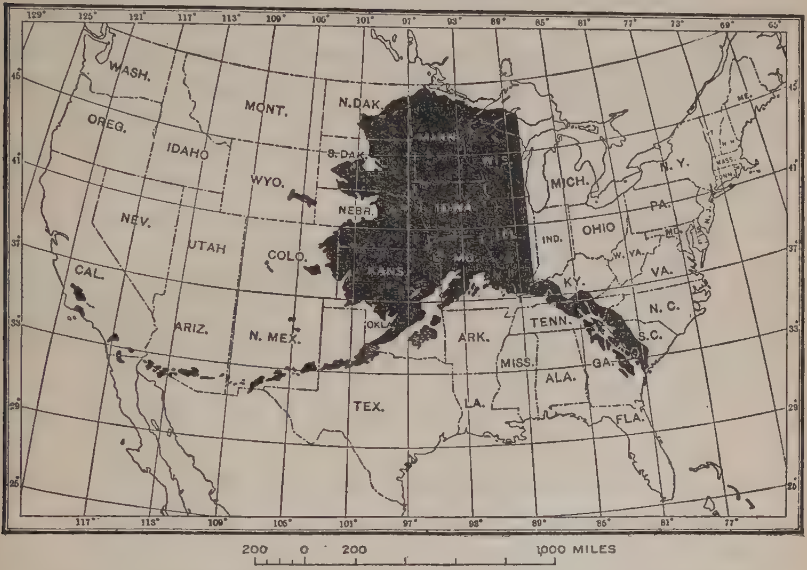
[14] See Foster, J. W., The Alaskan boundary: Nat. Geog. Mag., November, 1899, and January, 1904; also Riggs, Thomas, Marking the Alaskan boundary: Idem, July, 1909.

It is an interesting fact that the area of Alaska and the Aleutian Islands, if superimposed on the United States in true north-south position so as to touch the Canadian boundary a short distance west of the Lake of the Woods, would reach the Atlantic Ocean near the line between Georgia and South Carolina, cross the Mexican boundary in southwestern New Mexico, and touch the Pacific Ocean in southern California. (See fig. 4.)


129°
125°
121°
117°
113°
109°
105°
101°
97°
93°
89°
85°
81°
77°
73°
69°
65°
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41°
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25°
WASH.
OREG.
IDAHO
MONT.
N.DAK.
S.DAK.
WYO.
NEBR.
NEV.
UTAH
COLO.
CAL.
ARIZ.
N. MEX.
OKLA.
KANS.
IOWA
MO.
MICH.
IND.
OHIO
KY.
TENN.
ARK.
MISS.
ALA.
GA.
S.C.
N. C.
VA.
W.VA.
MD.
PA.
N. Y.
MASS.
CONN.
ME.
TEX.
LA.
FLA.
200 0 200 1000 MILES

FIGURE 4.—Map showing the relative size of Alaska and the United States

HAWAIIAN ISLANDS

The Hawaiian Government in 1851 seriously considered the transfer of sovereignty of the Hawaiian Islands to the United States, but the plan was for the time being laid aside. Annexation to the United States was authorized by the Hawaiian Constitution of 1852, "if indispensable to free it from insults and oppression of any foreign powers." Annexation was again under consideration in 1854, and a draft of a treaty was prepared whereby the islands would be ceded to the United States, but the sudden illness and death on December 15, 1854, of King Kamehameha III, who had favored the treaty, put an end to the negotiations.[15]

The Republic of Hawaii was formally annexed to the United States by the voluntary action of its citizens and a joint resolution of Congress approved July 7, 1898. The transfer of sovereignty took place August 12, 1898. The area was constituted a Territory by act of April 30, 1900, effective June 14, 1900.[16]

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[15] The facts above stated are taken from an address presented by Prof. W. D. Alexander before the Hawaiian Historical Society on July 2, 1897 (Hawaiian Hist. Soc. Papers No. 9).

The Hawaiian Islands and adjacent islets are scattered over a considerable area which extends nearly 2,000 miles in a general northwest-southeast direction and has a width of about 150 miles. (See fig. 3.) The eight inhabited islands, which lie between latitude 19° 00′ and 22° 15′ N., longitude 155° 00′ and 162° 00′ W., have a total area of 6,406 square miles and a total coast line of 957 miles, as follows:

Hawaii, greatest length 89 miles, greatest width 72 miles, area 4,016 square miles; the highest point is Mauna Kea, 13,784 feet above sea level.

Maui, about 48 miles long and 26 miles wide, area 728 square miles; highest point 10,032 feet above sea level.

Oahu, about 43 miles long and 30 miles wide, area 598 square miles; highest point slightly over 4,000 feet.

Kauai, nearly circular, about 26 miles in diameter, area 547 square miles; highest point about 5,200 feet.

Molokai, about 38 miles long and 9 miles wide, area 261 square miles; highest point 4,970 feet.

Lanai, about 18 miles long and 12 miles wide, area 139 square miles; highest point 3,400 feet.

Niihau, about 18 miles long and 3 to 6 miles wide, area 73 square miles; highest point 1,280 feet.

Kahoolawe, about 11 miles long and 6 miles wide, area 44 square miles; highest point 1,430 feet.

The larger islands outside the main group are as follows:

Nihoa or Bird Island, latitude 23° 06′ N., longitude 161° 58′ W., about three-quarters of a mile long and a quarter of a mile wide, area 155 acres; highest point 903 feet.

Gardner Island, latitude 25° 01′ N., longitude 167° 59′ W., an inaccessible rock 170 feet high and about 600 feet in diameter.

Laysan Island, latitude 25° 42′ N., longitude 171° 44′ W., 1¾ miles long, 1 mile wide; 55 feet in extreme height.

Lisiansky Island, latitude 26° 00′ N., longitude 173° 50′ W., about 1 mile long, half a mile wide, and 44 feet high.

The Midway Islands, sometimes called Brooks Islands, two small coral islands in latitude 28° 13′ N., longitude 177° 22′ W., about 1,200 miles a little north of west from Honolulu, were discovered by Captain Brooks, an American shipmaster on a Hawaiian vessel, in 1859. Possession was taken on behalf of the United States on September 30, 1867, by Capt. William Reynolds, of the U. S. S. *Lackawanna*, who stated that the larger island was "the first island ever added to the domain of the United States beyond our own [American] shores." [17] The larger island is 1¾ miles long and rises 43 feet above sea level. On this island there is a cable station and lighthouse. The total area of the two islands is about 1½ square miles.

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[16] 31 Stat. L. 141. For a summary of legislative acts relating to this transfer see Moore, J. B., A digest of international law: 56th Cong., 2d sess., H. Doc. 551, vol. 1, pp. 475–520, 1906.

Ocean (also called Cure or Kuré) Island, latitude 28° 25′ N., longitude 178° 25′ W., an atoll about 15 miles in circumference.

Kaula, a barren, rocky crescent-shaped island about 20 miles southwest of Niihau; about one-sixth of a square mile in area, highest point 550 feet; set aside by the Territorial Governor in December, 1924, as a site for a lighthouse.[18]

Two islands at some distance southwest of the main group are under the jurisdiction of Hawaii; these are

Johnstons Island, also called Cornwallis Island, latitude 16° 45′ N., longitude 169° 30′ W., a grass-covered lagoon island half a mile in length.

Palmyra Island, latitude 5° 52′ N., longitude 162° 06′ W., known also as Samarang Island, was annexed to Hawaii in 1862. It is an atoll occupying an area about 6 miles long and 1½ miles wide and consists of more than 50 small coral islets ranging from less than half an acre to 46 acres in size, covered with brush and cocoanut trees.[19]

PORTO RICO, GUAM, AND THE PHILIPPINE ISLANDS [20]

The next important accession of territory made by the United States consists of the islands ceded by Spain by the treaty of peace concluded December 10, 1898.[21] Article II of that treaty is as follows:

> Spain cedes to the United States the island of Porto Rico and other islands now under Spanish sovereignty in the West Indies, and the island of Guam in the Marianas or Ladrones.

Porto Rico.—Porto Rico has an area of 3,349 square miles, an extreme length of 109 miles, a width of 39 miles, and a greatest height of 3,532 feet. The largest of the other West Indian islands referred to is Vieques; others are Culebra, Mona, and Desecheo. The total area of the smaller islands is 86 square miles. These islands, including Porto Rico, all lie in the area between latitude 17° 42′ and 18° 31′ N. and longitude 65° 20′ and 67° 55′ W. Possession was taken by the United States October 18, 1898.

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[17] 40th Cong., 3d sess., S. Rept. 194, p. 12, 1869. This report contains an extended description of the islands.

[18] For reference to other islands belonging to this group see Coast pilot notes on Hawaiian Islands: U. S. Coast and Geodetic Survey, Serial 227, 1923. See also 55th Cong., 3d sess., S. Doc. 16, 1898; 52d Cong., 2d sess., S. Ex. Doc. 76, 1893; Moore, J. B., op. cit., vol. 1, p. 555.

[19] Pacific islands pilot: U. S. Hydrographic Office Pub. 166, vol. 2, p. 444, 1916. Rock, J. F., Palmyra Island, with a description of its flora, Honolulu, 1916.

[20] For information on the insular possessions of the United States see Noncontiguous territory; Supreme Court decisions and official opinions by the Attorney General: 59th Cong., 2d sess., S. Doc. 204, 1907; 61st Cong., 1st sess., S. Doc. 47, 1909; 62d Cong., 2d sess., S. Doc. 306, 1912; 63d Cong., 1st sess., S. Doc. 173, 1914, etc.

[21] Malloy, W. M., op. cit., vol. 2, p. 1691.

Guam.[22]—The island of Guam is at latitude 13° 30′ N., longitude 144° 45′ E. Its greatest length is 30 miles, width 4 to 8 miles, area 206 square miles (as scaled from United States Coast and Geodetic Survey chart 4202), highest point 1,334 feet.

Philippine Islands.—The main group of the Philippine Islands comprises the islands lying within the following limits, as defined in Article III of the treaty:[23]

> A line running from west to east along or near the twentieth parallel of north latitude, and through the middle of the navigable channel of Bachi, from the one hundred and eighteenth (118th) to the one hundred and twenty-seventh (127th) degree meridian of longitude east of Greenwich; thence along the one hundred and twenty-seventh (127th) degree meridian of longitude east of Greenwich to the parallel of four degrees and forty-five minutes (4° 45′) north latitude; thence along the parallel of four degrees and forty-five minutes (4° 45′) north latitude to its intersection with the meridian of longitude one hundred and nineteen degrees and thirty-five minutes (119° 35′) east of Greenwich; thence along the meridian of longitude one hundred and nineteen degrees and thirty-five minutes (119° 35′) east of Greenwich to the parallel of latitude seven degrees and forty minutes (7° 40′) north; thence along the parallel of latitude seven degrees and forty minutes (7° 40′) north to its intersection with the one hundred and sixteenth (116th) degree meridian of longitude east of Greenwich; thence by a direct line of the intersection of the tenth (10th) degree parallel of north latitude with the one hundred and eighteenth (118th) degree meridian of longitude east of Greenwich; and thence along the one hundred and eighteenth (118th) degree meridian of longitude east of Greenwich to the point of beginning.

For these islands the sum of $20,000,000 was paid by the United States to Spain.

The limits prescribed by this treaty did not include several islands south of the main Philippine group that in 1898 also belonged to Spain. This omission was corrected by treaty concluded November 7, 1900, which, in part, reads as follows:[24]

> Spain relinquishes to the United States all title and claim of title, which she may have had at the time of the conclusion of the Treaty of Peace of Paris, to any and all islands belonging to the Philippine Archipelago, lying outside the lines described in Article III of that Treaty and particularly to the islands of Cagayan Sulú and Sibutú and their dependencies, and agrees that all such islands shall be comprehended in the cession of the Archipelago as fully as if they had been expressly included within those lines.

For these islands the United States paid Spain $100,000.

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[22] Searles, P. J., Guam, An outpost of the Pacific: Military Engineer, Washington, November-December, 1927, pp. 476–484.

[23] Malloy, W. M., op. cit., vol. 2, p. 1691.

[24] Idem, p. 1696. See also Moore, J. B., op. cit., vol. 1, p. 530.

The treaties with Spain of 1898 and 1900 did not definitely fix the southern boundary of the Philippine Islands. Certain small islands locally known as the Turtle and Mangsee Islands, near the northeast coast of Borneo, owned by Spain, at that time were under the administrative control of the British North Borneo Co.

In a convention between the United States and Great Britain concluded January 2, 1930, a boundary line was agreed on which should include as part of the Philippine Archipelago belonging to the United States all islands to the north and east of lines between certain points for which latitudes and longitudes were given, as scaled from Coast and Geodetic Survey charts Nos. 4707 and 4720. It was agreed that if from later surveys it should appear that the charts are in error, the line should pass between Little Bakkungaan and Great Bakkungaan Islands and between the Mangsee Islands and the Mangsee Great Reef. It was agreed that the British North Borneo Co. should continue its administrative control over the Turtle and Mangsee Islands during the pleasure of the United States.

There are seven islands in the Turtle Islands group, of which Taganak (about a mile in length and 554 feet in maximum height) is the largest. There is a lighthouse on Taganak Island. The Mangsee Islands are all small.

There are said to be more than 7,000 islands in the Philippine Archipelago having areas of one-tenth of a square mile or more. Only 31 of the islands have areas greater than 100 square miles. Luzon, the largest, has an area of about 40,969 square miles, and its coast line exceeds 2,200 miles. The highest peak in the entire group is Mount Apo, on the island of Mindanao, 9,610 feet in height.[25]

The estimated area of the Philippine Islands is 114,400 square miles.

Las Palmas, an inhabited island about 50 miles southeast of Mindanao, having an area of less than a square mile, although well within the limits of the Philippines as fixed by the treaty of 1898, was claimed by the Netherlands. The question of sovereignty was referred to an arbitrator, whose award, dated April 4, 1928, was that "The island of Palmas (or Miangas) forms in its entirety a part of Netherlands territory."

SAMOA ISLANDS[26]

For several years the United States, Great Britain, and Germany exercised a joint protectorate over the Samoa Islands.[27] For various reasons it was deemed best to bring this situation to an end.

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[25] For a brief history of the Philippines and description of the principal islands see U. S. Coast Pilot, Philippine Islands, 2 vols., U. S. Coast and Geodetic Survey, 1919, 1921.

[26] For reference to legislative action leading up to the acquisition of the Samoa group see Moore, J. B., op. cit., vol. 1, pp. 536–554; Malloy, W. M., op. cit., vol. 2, p. 1595.

[27] Thorpe, F. N., The Federal and State Constitutions, 59th Cong., 2d sess., H. Doc. 357, vol. 6, p. 3675, 1909.

England withdrew, and the islands were divided between Germany and the United States, the latter taking all the islands of the group lying east of longitude 171° west of Greenwich. This adjustment was reached by a convention between the United States, Germany, and Great Britain, concluded December 2, 1899, and proclaimed February 16, 1900.[28]

The natives of Samoa had no part in this convention, but certain chiefs of islands in 1900 and 1904 made cessions to the United States which were accepted by the President but not ratified by the Senate. A bill to remedy this apparent oversight was introduced in the Senate April 5, 1926, but did not become a law until February 20, 1929.[29]

Tutuila Island, the largest of the Samoan group belonging to the United States, has a length of 20 miles and a breadth of about 6 miles. Its extreme height is 2,141 feet, and its area (scaled from hydrographic chart 2924) is 52 square miles.

Anuu Island, about a mile from the east end of Tutuila, has a length of 1 mile, a height of 275 feet, and an area of half a square mile.

About 60 miles to the east are the three Manua Islands, the largest of which is Tau, 6½ miles in length, 3,056 feet in extreme height, and 17 square miles in area. Olosega Island is 2½ miles in length and 2,095 feet in height and covers an area of 2 square miles. Ofu Island is about 3 miles long; its highest point is 1,587 feet, and its area 3 square miles.

Rose Island is the name given an atoll about 3 miles in diameter, partly under water at high tide, 80 miles southeast of any of the other islands of the Samoan group. Sand Islet, the smaller of the two islets of the atoll, is about an acre in extent and its highest part 5 feet above high tide. Rose Islet has an area of about 8 acres, and its highest part is 11 feet above high water. It is covered in part with a dense grove of *Pisonia* trees but is without fresh water and is uninhabited. This islet has the distinction of being the southernmost land under the control of the United States.[29a] (See pl. 8.) Its geographic position is in latitude 14° 32′ S., longitude 168° 11′ W.

American Samoa lies between latitude 14° and 15° S. and longitude 168° and 171° W. The estimated area is 75 square miles.

The joint resolution of March 4, 1925, placed Swains Island (p. 55) under the administrative control of American Samoa.

WAKE ISLAND

Wake Island is an uninhabited atoll in latitude 19° 17′ N., longitude 166° 35′ E. Although it is usually referred to as a single island, there are three islands, separated by narrow and shallow channels. The largest is Wake Island, having an area of about 2 square miles; its highest point is 21 feet above sea level. The smaller islands, Wilkes and Peale, have a combined area of about three-quarters of a square mile and are 18 and 21 feet respectively above sea level. Formal possession on behalf of the United States was taken January 17, 1899,[30] by the commander of the U. S. S. *Bennington.*[31]

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[28] Thorpe, F. N., op. cit., vol. 6, p. 3685.

[29] 70th Cong., 2d sess., Pub. Res. 89. See Cong. Record, Apr. 10, 1926, pp. 1952–1954, for historical description of this accession.

[29a] It is now (1930) believed by many that the United States has valid claims to land

[27] Thorpe, F. N., The Federal and State Constitutions, 59th Cong., 2d sess., H. Doc. 357, vol. 6, p. 3675, 1909.

CANAL ZONE

In order to insure the construction of a ship canal across the Isthmus of Panama, a strip of land 10 miles in width was ceded to the United States by the Republic of Panama by a convention concluded November 18, 1903.[32] This area (see fig. 5) is described in Article II as

> a zone of land and land under water for the construction, maintenance, operation, sanitation, and protection of said canal of the width of ten miles extending to the distance of five miles on each side of the center line of the route of the canal to be constructed; the said zone beginning in the Caribbean Sea three marine miles from mean low water mark and extending to and across the Isthmus of Panama into the Pacific Ocean to a distance of three marine miles from mean low water mark with the proviso that the cities of Panama and Colon and the harbors adjacent to said cities, which are included within the boundaries of the zone above described, shall not be included within this grant. The Republic of Panama further grants to the United States in perpetuity the use, occupation, and control of any other lands and waters outside of the zone above described which may be necessary and convenient for the construction, maintenance, operation, sanitation, and protection of the said canal or of any auxiliary canals or other works necessary and convenient for the construction, maintenance, operation, sanitation, and protection of the said enterprise.
>
> The Republic of Panama further grants in like manner to the United States in perpetuity all islands within the limits of the zone above described and in addition thereto the group of small islands in the Bay of Panama, named Perico, Naos, Culebra, and Flamenco.

By Article XIV of the convention the United States agreed to pay to the Republic of Panama $10,000,000; also to make annual payments of $250,000 beginning nine years after the convention was ratified. Possession was taken of this tract on June 15, 1904; the boundaries of the 10-mile strip have been surveyed and have been marked at average intervals of half a mile by iron posts bearing brass caps.

Under the clause in Article II that permitted the United States to take control of "other lands and waters outside of the zone" the United States from time to time has taken possession of areas outside of the 10-mile belt, which are officially designated "auxiliary areas." The largest of these is a part of Gatun Lake, with its islands and its shores, up to an altitude of 100 feet above mean sea level.

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[30] Letter from U. S. Hydrographic Office, Dec. 21, 1925.

[31] See Moore, J. B., op. cit., vol. 1, p. 555; Pacific Islands Pilot, vol. 1, p. 527, U. S. Hydrographic Office, 1916.

[32] Malloy, W. M., op. cit., vol. 2, p. 1349.

A second convention was concluded September 2, 1914, which recognized the transfer of the Gatun Lake area to the United States and by Article III receded to the Republic of Panama an area of about 6½ square miles adjoining the city of Panama on the northeast.[33] This convention also defined the Canal Zone boundary around the city of Colon and the harbors of Colon and of Panama.

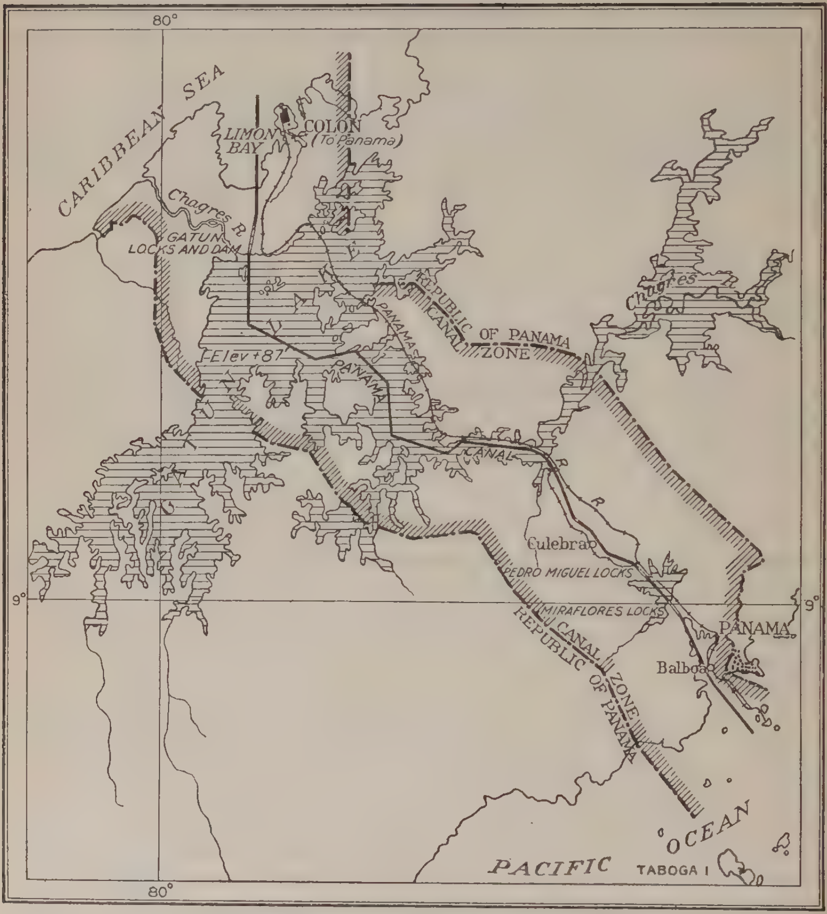
80°
CARIBBEAN SEA
LIMON BAY
COLON
(To Panama)
Chagres R
GATUN LOCKS AND DAM
Elev +87
PANAMA
PANAMA
REPUBLIC OF PANAMA
CANAL ZONE
Chagres
CANAL
R
R
Culebra
PEDRO MIGUEL LOCKS
MIRAFLORES LOCKS
9°
9°
PANAMA
Balboa
CANAL ZONE
REPUBLIC OF PANAMA
PACIFIC OCEAN
TABOGA I
80°

FIGURE 5.—Map of the Canal Zone

By Executive order of June 5, 1924, the United States took possession of a part of the upper Chagres River Basin, comprising an area of 22 square miles known as the Alhajuela Basin.

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[33] Malloy, W. M., op. cit., vol. 2, p. 15.

The estimated area of the Canal Zone (1929), including Gatun Lake to the 100-foot contour outside the original 10-mile zone, is 553.8 square miles—170.2 square miles of water and 383.6 square miles of land. The United States exercises jurisdiction over all other areas taken over for canal or military uses. These comprise small tracts in different parts of the Republic of Panama.[34]

In order " to remove all misunderstandings " regarding the acquisition by the United States from the Republic of Panama of the Canal Zone, which had until November 3, 1903, been under the jurisdiction of the Republic of Colombia, the United States by treaty signed April 6, 1914, ratified in 1921, and proclaimed March 30, 1922,[35] agreed to pay Colombia $25,000,000.

VIRGIN ISLANDS OF THE UNITED STATES

By a convention concluded August 4, 1916,[36] Denmark ceded to the United States

> all territory, dominion, and sovereignty possessed, asserted, or claimed by Denmark in the West Indies, including the islands of Saint Thomas, Saint John, and Saint Croix, together with the adjacent islands and rocks.

The purchase price was $25,000,000, or nearly $300 an acre.[37] By act of Congress, approved March 3, 1917,[38] this cession was to become effective after the President had announced that the amount agreed upon had been paid to Denmark. The proclamation was dated March 31, 1917.[39]

In several acts of Congress the former Danish West Indies are referred to as the Virgin Islands, but when possession was taken of them March 31, 1917, the name given by proclamation was "Virgin Islands of the United States of America," to distinguish them from the Virgin Islands belonging to Great Britain. Since June, 1917, the United States Navy Department has used the abbreviated form "Virgin Islands of the United States,"[40] and that name has been adopted by the Post Office and other departments.

St. Croix, the largest island included in this cession, is 23 miles long and 6 miles in extreme width; the highest point is 1,165 feet above sea level; the area 81.93 square miles.

St. Thomas, 12 miles long, 1 to 3 miles wide; highest point, Crown Mountain, 1,550 feet; area, 27.12 square miles.

St. John, 9 miles long, 5 miles wide; highest point, 1,277 feet; area, 19.2 square miles.

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[34] Letter from the governor of the Zone, Mar. 31, 1921.

[35] 42 Stat. L. 2123.

[36] 39 Stat. L. 1706.

[37] For an outline of the negotiations that led up to this purchase see 64th Cong., 2d sess., H. Rept. 1505, 1917.

[38] 39 Stat. L. 1132.

[39] 40 Stat. L., pt. 2, p. 1649.

[40] Letter from Director of Naval Intelligence Office, December 9, 1922.

Besides these, there are nearly a hundred small islands, none as great as a square mile in extent, but having a combined area of about 5 square miles, which makes the total area of the cession 133 square miles.[41]

GUANO ISLANDS

An act of Congress approved August 18, 1856, contains the following provisions:

> SECTION 5570. Whenever any citizen of the United States discovers a deposit of guano on any island, rock, or key, not within the lawful jurisdiction of any other government, and not occupied by the citizens of any other government, and takes peaceable possession thereof, and occupies the same, such island, rock, or key may, at the discretion of the President, be considered as appertaining to the United States.
>
> * * * * * * *
>
> SECTION 5578. Nothing in this title contained shall be construed as obliging the United States to retain possession of the islands, rocks, or keys, after the guano shall have been removed from the same.

Before 1880 bonds were filed for about 70 islands under this act,[42] but erroneous names and geographic positions were given for many of them; for some single islands several names and positions had been given. Some of the most important areas listed as guano islands are as follows:

Navassa Island, latitude 18° 24′ N., longitude 75° 01′ W., of volcanic origin, about 2 miles long and 1 mile wide, rising from 100 to 250 feet above the sea. A lighthouse with four attendants is on this island.

Quita Sueño Bank, latitude 14° 28′ N., longitude 81° 07′ W., extends for about 20 miles north and south and has patches of dry land at intervals. It was declared by presidential proclamation of February 25, 1919, to be under the exclusive jurisdiction of the

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[41] U. S. Coast and Geodetic Survey Pub. 103 (A geographic dictionary of the Virgin Islands of the United States, Washington, 1925), gives a historical sketch of the group, also name, area, and height of each island and cay. There is an excellent historical sketch of the islands in the report of the governor for 1928. Either of these publications may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 25 cents.

[42] Lists of these islands appear in a Treasury Department circular dated Feb. 12, 1869; in Moore, J. B., Digest of international law, vol. 1, pp. 556–580, 1906; in Magoon, C. E., Report on the legal status of the territory and inhabitants of the islands acquired by the United States * * * considered with reference to territorial boundaries, pp. 14–17, 1900; also on General Land Office maps of the United States. Brief descriptions of the Pacific islands are given in Brigham, W. T., Index to the islands of the Pacific Ocean, Honolulu, 1900; in Pacific islands pilot: U. S. Hydrographic Office Pub. 166, vol. 2, 1916; and in Reported dangers to navigators in the Pacific Ocean: U. S. Hydrographic Office Pubs. 41, 1871, 41a, 1879, and 41b, 1880. Stewart's Handbook of the Pacific islands, edited by Percy S. Allen (McCarron Stewart & Co. (Ltd.), 22–26 Goulburn Street, Sydney, N. S. W., Australia, 1920), besides excellent descriptions of all the principal islands, contains a bibliography. For reference to sovereignty and descriptions of other Pacific islands, see Statesman's Year Book, Macmillan & Co., Ltd., London, 1929 (indexed under heading "Pacific Islands"). The islands in the West Indies are described in Central America and Mexico pilots: U. S. Hydrographic Office Pub. 130, 1918, and West Indies pilot: U. S. Hydrographic Office Pub. 128, 1922.

United States, and "the north or other suitable portion" was reserved for a lighthouse. The lighthouse, which works automatically, is at the latitude and longitude given.

Roncador Cay, latitude 13° 34′ 30″ N., longitude 80° 04′ W., rises about 12 feet above the water. It is about a quarter of a mile long and is at the north end of a series of small cays. By presidential proclamation of June 5, 1919, it was declared to be under the exclusive jurisdiction of the United States and was reserved as a site for a lighthouse.

Serrana Bank, latitude 14° 17′ N., longitude 80° 24′ W., comprises three low islands, the largest of which, the southwest cay, is about half a mile long and has an extreme height of about 30 feet. This cay was declared by presidential proclamation of February 25, 1919, to be under the exclusive jurisdiction of the United States and was reserved for a lighthouse, which is in the position above given.

The Colombian Government, prior to 1928, disputed the claims of the United States to Serrana and Quita Sueño Banks and the Roncador Cay, but by agreement dated April 10, 1928, between the Secretary of State and the Colombian minister in Washington, it was decided to maintain the status quo, the United States to use the islands for maintenance of aids to navigation and Colombia to have fishing rights in the adjacent waters.

The Swan Islands are in latitude 17° 25′ N., longitude 83° 55′ W. The western island, Great Swan Island, is about 2 miles long, the eastern island about 1½ miles; each is about half a mile in breadth. A radio station and lighthouse are on Great Swan. In Opinions of the Attorney General, volume 34, there is a brief history of these islands and it is stated (p. 515) that

> The dominion of the United States Government was extended over the Swan Islands * * * February 11, 1863. * * * The sovereignty of the United States attached to these islands as of that date.

Honduras also claims sovereignty over the Swan Islands.

Swains Island, also called Gente Hermosa, and Quiros, latitude 11° 03′ S., longitude 171° 05′ W., is about 4 miles in circumference and 20 feet high; its area, including a central lagoon of one-third square mile, is 1⅓ square miles. It was discovered by Quiros in 1606 and named by him La Peregrina, but the position then given for it was so much in error as to lead an American whaling captain named Swain to assume the right of discovery upon landing there. It was examined in 1840 by the United States exploring expedition under Wilkes and renamed Swains Island. In 1856 and for many years thereafter it was occupied by an American family named Jennings, engaged in raising coconuts. An official communication regarding this island from the British Government, dated January 30, 1918, stated that it was understood "that the island in question is United States territory."

A joint resolution of Congress approved March 4, 1925,[43] asserted sovereignty of the United States over this island and made it a part of American Samoa. (See pp. 49–50.)

The ownership of some of the guano islands is uncertain. Several of them have been claimed by Great Britain, without formal protest by the United States, except that in the case of Christmas Island (latitude 1° 57′ N., longitude 157° 28′ W.) the Secretary of State, in a letter dated April 30, 1888, said that the United States reserved all questions that might grow out of the occupation.[44]

GUANTANAMO AND BAHIA HONDA, ISLAND OF CUBA

By agreements signed by the Presidents of the United States and Cuba, in February, 1903, Cuba agreed to lease or sell coaling or naval stations to the United States, in accordance with a clause in the constitution of the Republic of Cuba.[45] The lease of about 30 square miles of land and water on Guantanamo Bay, near Santiago, and of a small area at Bahia Honda, on the northwest coast, was signed July 2, 1903, the United States agreeing to pay $2,000 a year rental for the two areas.[46] The land boundaries of the area on Guantanamo Bay are thus described in the agreement:

> From a point on the south coast 4.37 nautical miles to the eastward of Windward Point Lighthouse, a line running north (true) a distance of 4.25 nautical miles;
>
> From the northern extremity of this line, a line running west (true) a distance of 5.87 nautical miles;
>
> From the western extremity of this last line, a line running southwest (true) 3.31 nautical miles;
>
> From the southwestern extremity of this last line, a line running south (true) to the seacoast.

The outlines of this area are shown on United States Hydrographic Office Chart 1857.

No use has yet been made of the Bahia Honda area by the United States.

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[43] 43 Stat. L. 1357.

[44] Letter from the Director of the Office of Naval Intelligence, U. S. Navy Department, Sept. 12, 1919.

[45] Malloy, W. M., op. cit., vol. 1, p. 358.

[46] Idem, p. 361. Cong. Record, March 12, 1925, p. 184, states that an advance payment of $102,000 on this account had been made to enable Cuba to purchase privately owned land within the area. See 68th Cong., 2d sess., S. Doc. 166, p. 310, 1924, for agreement requiring this action.

ISLE OF PINES

The Isle of Pines, covering an area of 1,080 square miles, 35 miles southwest of Cuba, was for many years after the Spanish war considered United States territory.[47]

A treaty between Cuba and the United States which would confirm the title was concluded in 1903, but after more than 20 years' delay was rejected by the United States Senate. This island is therefore under the sovereignty of Cuba.[48]

GREAT AND LITTLE CORN ISLANDS

A convention between the United States and Nicaragua signed August 5, 1914, and proclaimed June 24, 1916,[49] provided for the leasing to the United States for 99 years of the Great and Little Corn Islands and of a site for a naval base at a place to be selected bordering on the Gulf of Fonseca, with the privilege of renewing the lease. Great Corn Island is in latitude 12° 10′ N., longitude 83° 05′ W. It is about 2½ miles in length by 2 miles in width; the highest point is 370 feet above sea level. Little Corn Island is about 7 miles to the northeast and has an area of about 1 square mile; its highest point is 50 feet above sea level.

By the same convention the United States acquired the perpetual right to construct and maintain a ship canal between the Caribbean Sea and the Pacific Ocean by way of Lake Nicaragua. These concessions cost the United States $3,000,000. Sovereignty over these islands and those along the Mosquito Coast was in dispute between Colombia and Nicaragua prior to 1928, but in that year a treaty was concluded which, when ratified by legislative action of the two nations, will confirm Nicaragua's claim.

TONGA ISLANDS

By Article VI of a treaty between the United States and the King of Tonga, signed October 2, 1886, the King of Tonga agreed

> to secure to the Government of the United States by lease at nominal rent * * * use of necessary ground in any harbor of the Tonga Islands which shall be mutually agreed upon for the purpose of establishing a permanent coaling and repair station.

Ground thus acquired was to remain under Tongan sovereignty. Article XIV specified that this agreement regarding a coaling and repair station could be abrogated only by mutual consent.[50] So far as can be ascertained no use has yet been made by the United States of the privilege thus acquired.

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[47] See Malloy, W. M., op. cit., vol. 1, p. 364.

[48] 59th Cong., 1st sess., S. Doc. 205, 1906, describes this island in great detail.

[49] 39 Stat. L., vol. 2, p. 1661.

[50] Malloy, W. M., op. cit., vol. 2, p. 1781.

This treaty was denounced by Great Britain on behalf of the King of Tonga in 1919, but by note dated March 3, 1921, the United States reaffirmed its rights under Article VI.

The Tonga Islands are in latitude 21° S., longitude 175° W.

YAP ISLAND

Although the United States does not own the island of Yap, it has important treaty rights there. The island is of volcanic origin and is in latitude 9° 30′ N., longitude 138° 10′ E. Including adjacent coral reefs, it is about 35 by 4½ miles in extreme dimensions, and its area is about 80 square miles. Its highest point is 1,050 feet above sea level. It was formerly a German possession and is now a Japanese mandate.

By treaty with Japan, ratified by the United States Senate March 1, 1922, the United States acquired

> free access to the island of Yap on a footing of entire equality with Japan * * * in all that relates to the existing Yap-Guam cable or of any cable which may hereafter be laid or operated by the United States or its nationals connecting with the island of Yap.
>
> The United States and its nationals * * * have the right to acquire and hold * * * all kinds of property and interests, * * * including lands, buildings * * *.

No permit or license shall be required for landing or operating cables. Freedom of entry and exit is granted.

> No taxes, port, harbor, or landing charges or exactions of any nature whatsoever shall be levied either with respect to the operation of cables or radio stations, or with respect to property, persons, or vessels.

WRANGELL ISLAND

Wrangell Island is in the Arctic Ocean, about 100 miles from the Siberian coast. A harbor in the southeastern part is in latitude 70° 57′ N. and longitude 178° 10′ W. The island is about 80 miles long and 30 miles wide; its highest point is 2,500 feet above sea level. It was sighted in 1867 by the captain of a United States sailing vessel. In 1881 officers from United States naval vessels landed on the island and claimed it for the United States.[51] According to newspaper reports of October 4, 1926, the Soviet Government had landed a colony of 50 persons on this island, hoisted the Russian flag, and claimed it for that country. An airplane survey is said to have been made and the area found to be 2,925 square miles.

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[51] See Arctic Pilot, vol. 1, p. 338, 1917; U. S. Geol. Survey Bull. 299, p. 682, 1906; U. S. Hydrographic Office Chart 906; and Problems of polar research, p. 241, New York, Am. Geog. Soc., 1928.

BENNETT, HENRIETTA, AND JEANNETTE ISLANDS

Bennett, Henrietta, and Jeannette Islands were discovered by the DeLong polar expedition and claimed for the United States in 1881, but were only partly explored.

Bennett, the largest of the three, is about 300 miles from the mainland of Siberia, in latitude 76° 38′ N., approximate longitude 149° E. This island probably has an area of several hundred square miles, possibly more than 1,000, and altitudes above sea level of 300 feet or more.

Henrietta Island is in latitude 77° 8′ N., longitude 157° 45′ E., and Jeannette Island in latitude 76° 47′ N., longitude 158° 56′ E.; each has an area of approximately 50 square miles and an altitude of more than 500 feet.[52]

ISLANDS IN THE NORTH POLAR REGION

There have thus far been no formal international agreements regarding sovereignty over the known or undiscovered islands in the Arctic Ocean. Canada claims jurisdiction over the area between west longitudes 60° and 141° from the mainland north to the Pole. Such claims as the United States may have in polar regions have not been formally recognized by other nations. Although none of these islands are at present of economic importance, they may prove of value in the future.

It is doubtful whether international laws would justify such wholesale claims in polar regions as those that have been made.[53]

UNITED STATES RIGHTS IN FOREIGN COUNTRIES [54]

Under the commonly accepted principles of international law diplomatic representatives are immune from the criminal and civil jurisdiction of the country of their sojourn, and this immunity is, generally speaking, extended to the dwellings and the archives of the missions. The official residences of envoys are "in a sense and for some points only considered as though they were outside of the territory of the receiving States."[55] "These can not be entered, searched, or detained under process of local law or by local authorities"[56] except by consent of the country represented.

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[52] For further information regarding these islands see The voyage of the *Jeannette*, ed. by Emma DeLong, vol. 2, pp. 679–689, Boston, 1883, and 47th Cong., 2d sess., H. Ex. Doc. 108, p. 361, 1883.

[53] For an excellent discussion of these questions see Miller, D. H., Political rights in the Arctic: Foreign Affairs Mag., vol. 4, pp. 47–60, 1926; vol. 5, pp. 508–510, 1927; also revised reprint in Problems of polar research, pp. 235–250, Am. Geog. Soc., 1928. R. N. R. Brown (The polar regions, London, Methuen & Co., Ltd., 1927), in a chapter on political geography, describes claims by different nations to land in the polar regions. On page 167 he states: "Annexation by private persons is null and void. To be valid it must be by an act of State. * * * Discovery and exploration do not in themselves constitute a title to ownership." J. G. Hayes (Antarctica, London, Richard Press, 1928), in discussing territorial rights, states (p. 359) that "discovery is recognized as a valid title to territory only if followed by occupation; though it strengthens a title based on occupancy." See also Lawrence, T. J., Principles of international law, 7th ed., pp. 148–149, 1923, and Joerg, W. L. G., Brief history of polar explorations since the introduction of flying, American Geographical Society special publication No. 11, New York, 1930. The areas claimed by foreign nations are outlined on the accompanying maps. United States rights in Antarctica are discussed on pp. 34–36.

[54] These are usually called extraterritorial rights.

Similar rules apply to men-of-war, which, when sailing or at anchor in foreign waters, are subject only to the laws of the nations whose flags they fly.

The seizure by a Coast Guard vessel of a ship flying the United States flag, while 34 miles from the coast, was held legal by the United States Supreme Court, which stated[57] that

> The high sea is common to all nations and foreign to none; and every nation having vessels there has power to regulate them and also to seize them for a violation of its laws. * * *
>
> Our navigation laws govern American merchant vessels on the high seas. * * *
>
> The Coast Guard is authorized to arrest American vessels subject to forfeiture under our law, no matter what the place of seizure and no matter what the law violated.

Buildings for the use of diplomatic missions of the United States are owned by this government in the following-named capitals: Tirana, Albania; Rio de Janeiro, Brazil; Santiago, Chile; Peiping (Peking), China; San Jose, Costa Rica; Habana, Cuba; Prague, Czechoslovakia; London, England; Paris, France; Mexico City, Mexico; Tangier, Morocco; Oslo, Norway; Panama City, Panama; Teheran, Persia; San Salvador, Salvador; and Bangkok, Siam. Several acres of land on which buildings are to be erected is owned by the United States in Tokyo, Japan.

Buildings or land are also owned by the United States in Aden, Arabia; Ottawa, Canada; Amoy, Shanghai, and Mukden, China; Matanzas and Santiago, Cuba; Tegucigalpa, Honduras; Calcutta, India; Yokohama and Nagasaki, Japan; Seoul, Chosen; Bluefields, Corinto, and Managua, Nicaragua; Lima, Peru; Tahiti, Society Islands; Penang, Straits Settlements; and Constantinople, Turkey.

By an act approved May 7, 1926, $10,000,000 was appropriated for the purchase or construction of buildings for use of the United States in foreign countries.

Land for radio stations, etc., is held under long-time leases at Port au Prince, Haiti, for 99 years, and at Yokohama, Japan, for 999 years.[58]

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[55] Oppenheim, L., International law, a treatise, vol. 1, p. 631, 1928.

[56] Moore, J. B., op. cit., vol. 4, p. 646.

[57] 274 U. S. 511, 513, 531. In this decision there are numerous references to other cases of the same kind.

[58] See Certain lands owned by the United States: 57th Cong., 2d sess., H. Doc. 425, 1903; also 60th Cong., 1st sess., H. Doc. 375, 1907.

TERRITORIAL WATERS

"Territorial waters" is the term applied to the part of the open sea over which a bordering nation may claim jurisdiction for its own protection. It is generally conceded that jurisdiction over a belt of water along the coast 1 marine league[59] (about 3½ statute miles) wide, measured from the low-water line, may be thus claimed, but the passage of neutral vessels engaged in peaceful pursuits through this area may not be forbidden.

The general rule regarding territorial waters has many exceptions and "now has no legal basis except the so-called 'common consent of nations.'"[60]

Bays or arms of the sea, if in large part surrounded by the territory of a single nation, are usually considered entirely within the jurisdiction of that nation, even though the entrances are more than 2 leagues across.

The Hague tribunal in September, 1910, decided in a special case submitted to it (regarding fisheries in the North Atlantic) that for bays contiguous to the territory of the Dominion of Canada

> the 3 marine miles are to be measured from a straight line drawn across the body of water at the place where it ceases to have the configuration and characteristics of a bay. At all other places the 3 marine miles are to be measured following the sinuosities of the coast.[61]

This decision does not now apply to other localities but may be considered a precedent for future agreements.[62]

A joint commission acting under the treaty with Great Britain of June 5, 1854,[63] agreed on proper locations for the mouths of 105 rivers emptying into the Atlantic between the 36th parallel and northern Labrador, which they defined by straight lines between well-known points.[64] Although the treaty was abrogated in 1866, the positions selected for the river mouths may still be accepted as well chosen.

When the 3-mile limit was adopted it was thought that it was the extreme range of cannon that could be used for coast defense, but now that the range of modern guns is more than 20 miles efforts have been made to increase that limit.

In section 1 of the treaty between the United States and Great Britain signed January 23, 1924, it was declared that 3 marine miles extending from the coast-line outwards and measured from low-water mark constitute the proper limits of territorial waters.

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[59] Texas claimed jurisdiction over the Gulf for 3 leagues from land. See p. 37.

[60] Encyclopaedia Britannica, 11th ed., vol. 14, p. 698, 1910.

[61] Charles, Garfield, Treaties, conventions, etc., between the United States of America and other powers: 62d Cong., 3d sess., S. Doc. 1063, p. 69, 1913; also 67th Cong., 4th sess., S. Doc. 348, p. 2635, 1923, which replaces S. Doc. 1063 of 1913.

[62] For numerous references to decisions regarding territorial waters, see Hyde, C. C., International law, vol. 1, pp. 251–270, Boston, 1922.

[63] See Malloy, W. M., op. cit., vol. 1, p. 668.

[64] See Moore, J. B., op. cit. (History of arbitration), vol. 1, pp. 473–494, 1898, for report of commissioners.

That treaty gave the United States certain conditional rights of search or seizure over private vessels flying the British flag when within one hour's sailing distance from the coast of the United States or its possessions. This distance is popularly referred to as the "12-mile limit." Similar treaties have been effected with several other nations. Section 581 of the tariff act of 1922[65] provides for the boarding of any vessel within 4 leagues of the coast of the United States in order to inspect, search, or seize the vessel, where a violation of United States law is evident.

AIR SPACE OVER A STATE OR NATION

The right of a state or nation to the control of the air space above it is not well established, but it is generally conceded that a state or nation may make such regulations or restrictions as it deems proper for the control of airships above its territory, and this right has often been exercised.[66]

OUTLYING POSSESSIONS

The following information regarding the administration of outlying possessions of the United States has been obtained from the departments named. The list does not include a number of small islands, mostly uninhabited, that have not been formally placed under the control of any department but are visited from time to time by ships of the Navy. The Governor of the Canal Zone reports to the President direct.

Administrative control of the principal outlying possessions of the United States, January, 1930

Name	Under control of—		Executive officer and address	Remarks	Described on page
	Department	Bureau			
Alaska	Interior		Governor, Juneau, Alaska.		39
Canal Zone	Independent		Governor, Balboa Heights, Canal Zone.	Information obtainable from purchasing officer, Washington, D. C.	51
Guam	Navy	Island Governments.	Governor, Agana, Guam.	Send mail care of postmaster, San Francisco.	48
Hawaii	Interior		Governor, Honolulu, T. H.		45
Samoa (American).	Navy	Island Governments.	Governor, Pago Pago, Tutuila.	Send mail care of postmaster, San Francisco.	49
Swains Island	do		do	Administered as a part of American Samoa.	55
Philippine Islands.	War	Insular Affairs	Governor, Manila, P. I.		48
Porto Rico	do	do	Governor, San Juan, P. R.		47
Virgin Islands of the United States.	Navy	Island Governments.	Governor, St. Thomas, Virgin Islands.		53

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[65] 42 Stat. L. 979.

[66] For references to published data on this subject, see Hyde, C. C., op. cit., vol. 1, pp. 324–334, and 70th Cong., 2d sess., S. Doc. 221, 1929.

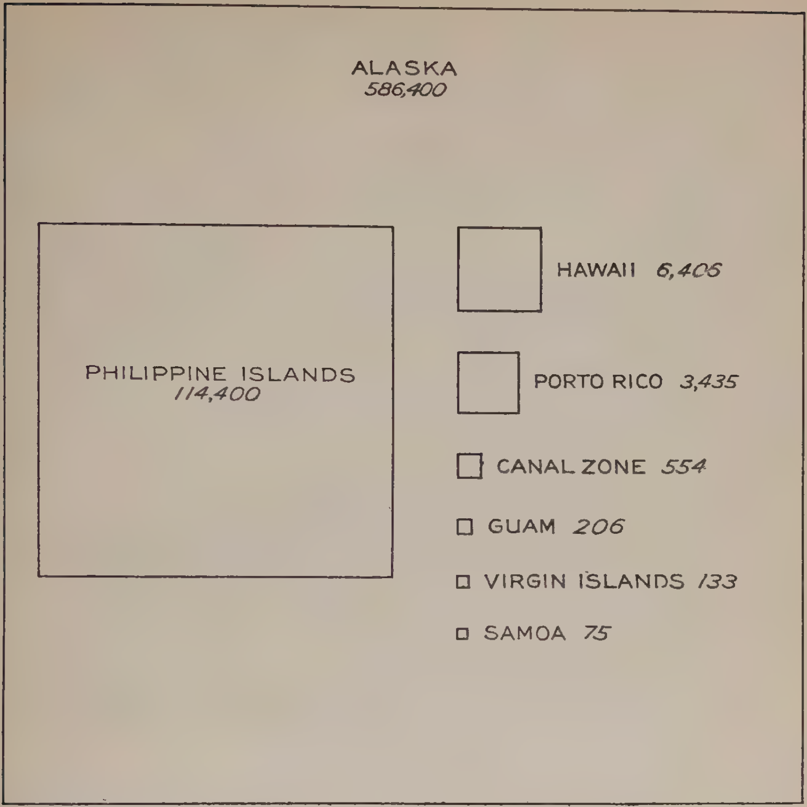

FIGURE 6.—Relative size of possessions of the United States, plotted on a scale of 1 to 12,000,000. Figures indicate square miles. Continental United States on the same scale would be represented by a square 9⅕ inches on each side, covering an area about four and a quarter times the combined area of all the outlying possessions

THE PUBLIC DOMAIN AND THE CHANGES MADE THEREIN[67]

CESSIONS BY THE STATES

In 1776, when the thirteen colonies declared their independence of England, many of them possessed unoccupied territory, much of which was entirely detached and lay west of the Appalachian Mountains. Thus Georgia included the territory from its present eastern limits westward to the Mississippi River. North Carolina possessed a strip extending from latitude 35° to 36° 30′, approximately, and running westward to the Mississippi, which included the area of the present State of Tennessee. In like manner Virginia possessed what is now Kentucky, and a number of States, including Pennsylvania, New York, Massachusetts, Connecticut, and Virginia, laid claims to areas in what was afterward known as the territory northwest of the River Ohio, a region now contained mainly in the States of Ohio, Indiana, Illinois, Michigan, and Wisconsin. These claims were to a greater or less extent conflicting. Authority over some areas was claimed by several States, and most of the boundary lines were very ill defined.

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[67] For a discussion of these changes see Paxson, F. L., History of the American frontier, 1763–1893, chaps. 5 and 6, Cambridge, 1924. 56th Cong., 1st sess., S. Doc. 148, 1900, contains copies of organic acts for the Territories from 1787 to 1900 compiled from United States statutes. It contains a copy of the ordinance of 1787 and notes regarding it, also extracts from State papers relating to United States territory in general.

The ownership of these western lands by individual States was opposed by those States that did not share in their possession, mainly on the ground that the resources of the General Government, to which all contributed, should not be used for the protection and development of this region, the advantages of which would inure to the benefit of only a favored few.

Moved by these arguments, as well as by the conflicting character of the claims, which must inevitably lead to trouble among the States, Congress passed, on October 30, 1779, the following resolution:

> Whereas the appropriation of the vacant lands by the several States during the continuance of the war will, in the opinion of Congress, be attended with great mischiefs: Therefore,
>
> *Resolved*, That it be earnestly recommended to the State of Virginia to reconsider their late act of assembly for opening their land office; and that it be recommended to the said State, and all other States similarly circumstanced, to forbear settling or issuing warrants for unappropriated lands, or granting the same during the continuance of the present war.

This resolution was transmitted to the different States. The first to respond to it by the transfer of territory to the General Government was New York, whose example was followed by the other States. These transfers were the origin of the public domain. The cessions were made on the dates given below: [68]

New York, March 1, 1781.

Virginia, March 1, 1784, finally confirmed by the legislature December 30, 1788. The deed of cession by Virginia gives no limits further than to specify that the lands transferred "include only those lying northwestward of the River Ohio."

Massachusetts, April 19, 1785.

Connecticut, September 13, 1786. The Connecticut act of cession reserved an area in the northeastern part of Ohio, known as the Western Reserve.[69] On May 30, 1800, Connecticut gave to the United States jurisdiction over this area, but without giving up its property rights in it.

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[68] For interesting references to these cessions see Hibbard, B. H., A history of the public land policies, New York, 1924. See also Sherman, C. E., Original Ohio subdivisions: Ohio Cooperative Topog. Survey Final Rept., vol. 3, Columbus, 1925.

[69] See Western Reserve Univ. [Cleveland] Bull., August, 1923, pp. 37–57, for a history of this reserve.

South Carolina, August 9, 1787.
North Carolina, February 25, 1790.
Georgia, April 24, 1802.

The following paragraph from the deed of cession by New York defines the limits of its grant to the General Government:[70]

> Now, therefore, know ye, that we, the said James Duane, William Floyd, and Alexander M'Dougall, by virtue of the power and authority, and in the execution of the trust reposed in us, as aforesaid, have judged it expedient to limit and restrict, and we do, by these presents, for and in behalf of the said State of New York, limit and restrict the boundaries of the said State in the western parts thereof, with respect to the jurisdiction, as well as the right or pre-emption of soil, by the lines and in the form following, that is to say: A line from the northeast corner of the State of Pennsylvania, along the north bounds thereof to its northwest corner, continued due west until it shall be intersected by a meridian line, to be drawn from the forty-fifth degree of north latitude, through the most westerly bent or inclination of Lake Ontario; thence by the said meridian line to the forty-fifth degree of north latitude; and thence by the said forty-fifth degree of north latitude; but, if on experiment, the above-described meridian line shall not comprehend twenty miles due west from the most westerly bent or inclination of the river or strait of Niagara, then we do, by these presents, in the name of the people, and for and on behalf of the State of New York, and by virtue of the authority aforesaid, limit and restrict the boundaries of the said State in the western parts thereof, with respect to jurisdiction, as well as the right of pre-emption of soil, by the lines and in the manner following, that is to say: a line from the northeast corner of the State of Pennsylvania, along the north bounds thereof, to its northwest corner, continued due west until it shall be intersected by a meridian line, to be drawn from the forty-fifth degree of north latitude, through a point twenty miles due west from the most westerly bent or inclination of the river or strait Niagara; thence by the said meridian line to the forty-fifth degree of north latitude, and thence by the said forty-fifth degree of north latitude; * * *

The following paragraph from the deed of cession by Massachusetts gives the limits of the area ceded:[71]

> [We] do, by these presents assign, transfer, quitclaim, cede, and convey to the United States of America, for their benefit, Massachusetts inclusive, all right, title, and estate of and in, as well the soil as the jurisdiction, which the said Commonwealth hath to the territory or tract of country within the limits of the Massachusetts charter situate and lying west of the following line, that is to say, a meridian line to be drawn from the forty-fifth degree of north latitude through the westerly bent or inclination of Lake Ontario, thence by the said meridian line to the most southerly side line of the territory contained in the Massachusetts charter; but if on experiment the above-described meridian line shall not comprehend twenty miles due west from the most westerly bent or inclination of the river or strait of Niagara, then we do by these presents, by virtue of the power and authority aforesaid, in the name and on behalf of the said Commonwealth of Massachusetts, transfer, quitclaim, cede, and convey to the United States of America, for their benefit, Massachusetts inclusive, all right, title, and estate of and in as well the soil as the jurisdiction, which the

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[70] Donaldson, Thomas, The public domain, its history with statistics, p. 67, Washington, Public Land Commission, 1884.

[71] Idem, pp. 71–72.

> said Commonwealth hath to the territory or tract of country within the limits of the Massachusetts charter, situate and lying west of the following line, that is to say, a meridian line to be drawn from the forty-fifth degree of north latitude through a point twenty miles due west from the most westerly bent or inclination of the river or strait of Niagara; thence by the said meridian line to the most southerly side line of the territory contained in the Massachusetts charter aforesaid, * * *

The following clause from the act of the Legislature of Connecticut, authorizing the cession, defines its limits:[72]

> *Be it enacted* * * * That the delegates of this State, or any two of them, who shall be attending the Congress of the United States, be, and they are hereby, directed, authorized, and fully empowered, in the name and behalf of this State, to make, execute, and deliver, under their hands and seals, an ample deed of release and cession of all the right, title, interest, jurisdiction, and claim of the State of Connecticut to certain western lands, beginning at the completion of the forty-first degree of north latitude, one hundred and twenty miles west of the western boundary line of the Commonwealth of Pennsylvania, as now claimed by said Commonwealth, and from thence by a line drawn north, parallel to and one hundred and twenty miles west of the said west line of Pennsylvania, and to continue north until it comes to forty-two degrees and two minutes north latitude. Whereby all the right, title, interest, jurisdiction, and claim of the State of Connecticut, to the lands lying west of said line to be drawn as aforementioned, one hundred and twenty miles west of the western boundary line of the Commonwealth of Pennsylvania, as now claimed by said Commonwealth, shall be included, released, and ceded to the United States in Congress assembled, for the common use and benefit of the said States, Connecticut inclusive.

Connecticut reserved by this deed both the title and jurisdiction over a tract of her western lands lying between the western boundary of Pennsylvania and the then eastern boundary of her cession, comprising a strip 120 miles long and of irregular width lying between parallels 41° and 42° 2′ N. (the northeastern part of the present State of Ohio) and known as the "Western Reserve" of Connecticut in Ohio. Connecticut by act of legislature in October, 1797, tendered a release of jurisdiction over this tract to the United States, which Congress accepted April 28, 1800, and Connecticut confirmed May 30, 1800. A portion of this area, lying in the present Ohio counties of Erie, Huron, and Ottawa, was known as the "Fire lands" from the fact that the lands were donated by Connecticut for the use of citizens of Danbury and other places as a recompense for losses by fire and raids by British troops during the Revolution.

The cession of South Carolina was described as follows:[73]

> * * * all the territory or tract of country included within the river Mississippi and a line beginning at that part of the said river which is intersected by the southern boundary line of the State of North Carolina, and continuing along the said boundary line until it intersects the ridge or chain of mountains

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[72] Donaldson, Thomas, op. cit., p. 73.

[73] Idem, p. 76.

> which divides the eastern from the western waters, then to be continued along the top of said ridge of mountains until it intersects a line to be drawn due west from the head of the southern branch of Tugoloo River to the said mountains; and thence to run a due west course to the river Mississippi.

The State of North Carolina ceded [74]

> the lands situated within the chartered limits of this State, west of a line beginning on the extreme height of the Stone Mountain, at the place where the Virginia line intersects it; running thence along the extreme height of the said mountain, to the place where the Wataugo River breaks through it; thence a direct course to the top of the Yellow Mountain where Bright's road crosses the same; thence along the ridge of the said mountain, between the waters of Doe River and the waters of Rock Creek, to the place where the road crosses the Iron Mountain; from thence along the extreme height of the said mountain to where Nolichucky River runs through the same; thence to the top of the Bald Mountain; thence along the extreme height of the said mountain, to the Painted Rock, on French Broad River; thence along the highest ridge of the said mountain, to the place where it is called the Great Iron or Smoaky Mountain; thence along the extreme height of the said mountain, to the place where it is called the Unicoy or Unaka Mountain, between the Indian towns of Cowee and Old Chota; thence along the main ridge of the said mountain to the southern boundary of this State.

It will be noted that the above description of the eastern boundary of her ceded possessions agrees in general terms with the description of the western boundary of North Carolina, as given on page 149.

The articles of cession by Georgia describe the area ceded as follows: [75]

> * * * the lands situated within the boundaries of the United States, south of the State of Tennessee, and west of a line beginning on the western bank of the Chatahouchee River, where the same crosses the boundary line between the United States and Spain; running thence up the said river Chatahouchee, and along the western bank thereof to the great bend thereof, next above the place where a certain creek or river, called "Uchee" (being the first considerable stream on the western side, above the Cussetas and Coweta towns), empties into the said Chatahouchee River; thence in a direct line to Nickajack, on the Tennessee River; thence crossing the said last-mentioned river, and thence running up the said Tennessee River, and along the western bank thereof, to the southern boundary line of the State of Tennessee.

Of the area conveyed by these cessions to the General Government the part lying north of the Ohio was afterward erected into the "territory northwest of the River Ohio," and the rest lying south of that river, was known as the "territory south of the River Ohio." This did not include the area of the present State of Kentucky, which remained as a part of Virginia until it was admitted as a State in 1792.

The United States by act of Congress of September 9, 1850, purchased from the State of Texas about 124,000 square miles of land which Texas claimed when admitted to the Union. This land is now included in the States of Kansas, Colorado, New Mexico, Oklahoma, and Wyoming. (See fig. 14.)

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[74] Donaldson, Thomas, op. cit., p. 77; 1 Stat. L. 106.

[75] Donaldson, Thomas, op. cit., p. 80.

TERRITORY NORTHWEST OF THE OHIO RIVER

The territory north of the Ohio was bounded on the west by the Mississippi and a line running north from its source to the international boundary, on the north by the boundary line between the United States and the British possessions, on the east by the Pennsylvania and New York State lines, and on the south by the Ohio River. (See fig. 10.) It comprised an area of approximately 278,000 square miles. It was made up of claims of individual States as follows:[76]

1. Virginia claims, which consisted of all the territory west of Pennsylvania and north of the Ohio to the 41st parallel of north latitude, and above that her claim by capture as far as the northern limits of the land under the Crown which had been subject to the jurisdiction of the Province of Quebec and as far as Lakes Michigan and Huron.
2. The claim of Connecticut, which extended from the 41st parallel northward to the parallel of 42° 2′ and from the west line of Pennsylvania to the Mississippi River.
3. The claim of Massachusetts, which extended from the north line of the Connecticut claim above noted to latitude 43° 43′ 12″ N. and from the western boundary of New York to the Mississippi.
4. The belt or zone lying north of the Massachusetts claim, extending thence to the Canada line and west to the Mississippi River, obtained from Great Britain by the treaty of peace of September 3, 1783, became public domain after the Virginia cession.
5. At the time of the cession by the State of Virginia both Massachusetts and New York claimed the Erie triangle of about 324 square miles, which was subsequently bought by Pennsylvania and added to that State (p. 124).

From this territory were formed the States of Ohio, Indiana, Illinois, Michigan, and Wisconsin, that part of Minnesota east of the Mississippi River, and the northwest corner of Pennsylvania.

On July 13, 1787, a bill for its provisional division into not less than three nor more than five States was passed by Congress. In this bill the limits of the proposed States were defined, corresponding in their north and south lines to the present boundaries of Ohio,

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[76] Donaldson, Thomas, op. cit., p. 161.

Illinois, and Indiana. The following extract gives the text of the ordinance defining these boundaries:[77]

> **Article 5.** There shall be formed in the said territory, not less than three nor more than five States; and the boundaries of the States, as soon as Virginia shall alter her act of cession, and consent to the same, shall become fixed and established as follows, to wit: the western State in said territory shall be bounded by the Mississippi, the Ohio, and the Wabash rivers; a direct line drawn from the Wabash and Post Vincents due north to the territorial line between the United States and Canada; and by the said territorial line to the Lake of the Woods and Mississippi. The middle State shall be bounded by the said direct line, the Wabash, from Post Vincents to the Ohio, by the Ohio, by a direct line drawn due north from the mouth of the Great Miami to the said territorial line, and by the said territorial line. The eastern State shall be bounded by the last-mentioned direct line, the Ohio, Pennsylvania, and the said territorial line: *Provided, however*, And it is further understood and declared, that the boundaries of these three States shall be subject so far to be altered, that, if Congress shall hereafter find it expedient, they shall have authority to form one or two States in that part of the said territory which lies north of an east and west line drawn through the southerly bend or extreme of Lake Michigan.

Apparently this ordinance was not put in force until a provisional government was instituted by the appointment of a governor and secretary on February 1, 1788.

By act of May 7, 1800, Congress divided the "territory northwest of the Ohio" into two separate governments and ordered

> that all that part of the territory of the United States northwest of the Ohio river, which lies to the westward of a line beginning at the Ohio, opposite to the mouth of Kentucky river, and running thence to Fort Recovery, and thence north until it shall intersect the territorial line between the United States and Canada, shall, for the purposes of temporary government constitute a separate territory, and be called the Indiana Territory.

The eastern portion was called the "territory northwest of the River Ohio," and and a large part of it was admitted to the Union in 1802[78] as the State of Ohio. The remainder was added to Indiana Territory. (See fig. 16.)

In 1805 all that part of Indiana Territory lying north of a parallel drawn through the most southerly bend of Lake Michigan and east of a line drawn from the same point through the middle of Lake Michigan and north to the Canadian line became the Territory of Michigan. (See fig. 17.)

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[77] Donaldson, Thomas, op. cit., p. 155. For a plan with maps, proposed by a committee of which Jefferson was chairman, for the subdivision of the territory northwest of the Ohio, which was practically adopted by Congress in 1784, see Wisconsin Hist. Coll., vol. 2, p. 452, Madison, 1888. See also Smith, W. H., The St. Clair papers, vol. 2, p. 603, Appendix 1 (Force, Peter. The ordinance of 1787 and its history), Cincinnati, 1882; for text of the ordinance, see Poore, Ben Perley, Federal and State constitutions, etc., pt. 1, p. 429, 1877.

[78] There is some uncertainty regarding this date. See footnote 30, p. 187.

By act of February 3, 1809, Indiana Territory was again divided, and the Territory of Illinois was created from the part lying west of the Wabash River and a meridian running through the city of Vincennes, extending thence to the Canada line.

On December 11, 1816, Indiana was admitted to the Union as a State, with its boundaries defined as at present, and on December 3, 1818, Illinois was likewise admitted.

The act of June 28, 1834, added to the Territory of Michigan a portion of the Missouri River drainage basin as far west as the White Earth River and north to the 49th parallel and included for the first time a part of the drainage basin of the Red River, south of the 49th parallel, under a Territorial government. This addition to Michigan included also a small part of the Louisiana Purchase. (See p. 195 and fig. 17.)

Wisconsin Territory was formed in 1836 from the portion of the Territory of Michigan west of the present State of Michigan. On January 26, 1837, Michigan was admitted into the Union, with its present boundaries. On June 12, 1838, all that portion of Wisconsin Territory lying west of the Mississippi River and a line drawn due north from its source to the international boundary was made into the Territory of Iowa, and in 1848 Wisconsin was admitted as a State, with its boundaries as at present defined.

The admission of Wisconsin appears to have left the area which is now the northeastern part of Minnesota, lying east of the Mississippi and a line drawn due north from its source, without any government until the formation of Minnesota Territory, in 1849.

TERRITORY SOUTH OF THE OHIO RIVER

The "territory south of the River Ohio," the government of which was provided for by act of Congress approved May 26, 1790, was bounded on the north by the present northern boundary of Tennessee, on the east by the States of North Carolina, South Carolina, and Georgia, and on the west by the Mississippi River. It included besides the Tennessee area nominal possessions to the 31st parallel. The cessions that made up this region are as follows:

1. The area ceded by North Carolina was described as extending from latitude 36° 30′ N. (since found to be 36° 33′) southward to 35° and from the western boundary line of the present State to the Mississippi River. This is now the State of Tennessee.

2. The area ceded by South Carolina formed a belt 12 or 14 miles in width lying south of the 35th parallel and extending from her western boundary to the Mississippi River. It is doubtful whether under the terms of the original charters South Carolina possessed this strip or whether it was included in the possessions of Georgia. (See p. 153.)

3. The area ceded by Georgia comprised most of the territory of the present States of Alabama and Mississippi north of the 31st parallel.

Tennessee was admitted as a State in 1796. In 1798 Congress organized as the Territory of Mississippi a small rectangular area, bounded on the west by the Mississippi River, on the north by a parallel through the mouth of the Yazoo River, on the east by the Chattahoochee River, and on the south by the 31st parallel of north latitude. This area was subsequently enlarged so as to include the whole of what is now Mississippi and Alabama and a strip along the Gulf coast, which was at that time claimed by Spain. In 1817 the Territory was divided, and the eastern portion was made into Alabama Territory. Subsequently the two Territories were admitted as States.

LOUISIANA, THE AREAS FORMERLY BELONGING TO MEXICO, AND THE OREGON REGION

The Louisiana Purchase was effected in 1803. In 1804 the region thus obtained was divided into two parts; the southern was organized as Orleans Territory, and the remainder was called the District of Louisiana. The State of Louisiana, comprising most of the Territory of Orleans, was admitted to the Union in 1812. In the same year it was enlarged by the addition of the area lying between the Mississippi and Pearl Rivers, in the southeastern part, and the name of the District of Louisiana was changed to the Territory of Missouri. (See fig. 18.) In 1819 Arkansaw Territory was created, and in 1836 it was admitted as a State. (The State name was spelled with an "s" in place of the final "w.")

In 1821 the State of Missouri was formed from another portion of the Territory of Missouri, and in 1836 the boundaries of the State were extended to their present limits. In 1834 that part of this Territory lying north of the State of Missouri and east of the Missouri and White Earth Rivers was attached to the Territory of Michigan. (See fig. 17.) In 1836 this portion became part of the Wisconsin Territory. In 1838 it became part of the Territory of Iowa. In 1846 the State of Iowa was created, and in 1849 the remainder of the Iowa Territory was organized as the Territory of Minnesota. Minnesota was admitted as a State on May 11, 1858, with its present boundaries.

Indian Territory (unorganized) was set apart by act of June 30, 1834, and described as follows[79] (see fig. 21):

> all that part of the United States west of the Mississippi, and not within the States of Missouri and Louisiana, or the Territory of Arkansas * * * shall be taken and deemed to be Indian country.

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[79] 4 Stat. L. 729, 733.

Apparently this covered a large part of the area previously designated Territory of Missouri, but for judicial control the same act restricted the area to that commonly known as Indian Territory and bounded on the north by the north line of lands assigned to the Osage tribe of Indians, produced east to the State of Missouri; west by the Mexican possessions (100th meridian); south by the Red River; and east by the line of the Territory of Arkansas and the State of Missouri.[80]

While the cessions by the States and the Louisiana region were being subdivided Texas was admitted to the Union, and by the treaty of Guadalupe-Hidalgo and the Gadsden Purchase the United States acquired from Mexico the area west of the northern part of Texas and south of the 42d parallel. In the same period the northern boundary had been established on the 49th parallel to the Pacific Ocean.

Out of the great western region thus acquired were carved the following Territories:[81]

The Territory of Oregon, formed in 1848, extended from latitude 49° N., southward to latitude 42° and from the Pacific Ocean east to the summit of the Rocky Mountains. (See fig. 26.)

California was admitted as a State in 1850 with the same limits which it possesses at present.

The Territory of Utah, formed in 1850 (see fig. 24), extended from the 42d parallel southward to the 37th and from the California boundary line eastward to the Rocky Mountains.

The Territory of New Mexico comprised all the country lying south of Utah to the boundary lines of Texas and Mexico and from the California boundary eastward to the boundary of Texas. (See fig. 22.)

The Territory of Nebraska, formed from Missouri Territory in 1854, comprised the country from the 49th parallel to the 40th and from the Missouri and White Earth Rivers westward to the summit of the Rocky Mountains. (See fig. 20.)

The Territory of Kansas, formed by the same act as Nebraska, comprised the country extending from Missouri westward to the boundary of New Mexico and Utah and from the south boundary of Nebraska to the 37th parallel.

The Territory of Washington was formed in 1853 from a part of Oregon, its southern boundary being the Columbia River and the

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[80] Royce, C. C., Indian land cessions in the United States: Bur. Am. Ethnology Eighteenth Ann. Rept., pt. 2, 1899 (56th Cong., 1st sess., H. Doc. 736, 1899).

[81] For an outline of historical events relating to the organization of States west of the Mississippi and settlement of their boundaries, see Higgins, R. L., The development of trans-Mississippi political geography: Iowa Jour. Hist. and Politics, vol. 21, pp. 397–455, 1923. For titles of manuscripts and published papers relating to the Territories, see Calendar of papers in Washington archives relating to the Territories of the United States, Carnegie Inst. Washington, 1911.

46th parallel, and its east line being the summit of the Rocky Mountains. (See fig. 26.)

Oregon was admitted as a State in 1859, with its boundaries as at present established. The portion cut off from Oregon Territory was placed under the Territorial government of Washington.

The Territory of Dakota, formed in 1861, comprised all that region included in the present States of North Dakota and South Dakota and thence westward to the summit of the Rocky Mountains. (See fig. 19.)

The Territory of Nevada was organized from the western portion of the Territory of Utah in 1861. (See fig. 24.) As originally constituted, its east line was the 39th meridian west from Washington, and its southern boundary was the 37th parallel. It was admitted as a State in 1864, when its eastern boundary was made the 38th meridian (approximately 115° 03′ west from Greenwich). In 1866, by act of Congress, the eastern boundary was moved 1° still farther east and placed upon the 37th meridian west from Washington, and the triangular portion contained between the former southern boundary, the boundary of California, the Colorado River, and the 37th meridian was added, thus giving the State its present limits.

The Territory of Colorado was formed in 1861, with the limits of the present State. It was admitted as a State in 1876.

The Territory of Arizona, formed in 1863, included that portion of New Mexico lying west of the 32d meridian west of Washington.

The Territory of Idaho was formed in 1863 from parts of Dakota and Washington Territories. As originally constituted it included the area lying east of the present eastern limits of Oregon and Washington to the 27th meridian west of Washington. Its southern boundary was the northern boundary of Colorado and Utah—that is, the 41st and 42d parallels of latitude. (See fig. 25.) From this Territory was detached in 1864 the Territory of Montana, with nearly the limits of the present State, and in 1868 the Territory of Wyoming; these changes reduced Idaho to its present dimensions.

The Territory of Oklahoma, organized in 1890 from a part of the Indian Territory and the public-land strip north of Texas, when admitted as a State in 1907 included the Indian Territory also. (See fig. 21.)

PAYMENTS TO THE STATES

At the last session of the Twenty-second Congress an act was passed "to appropriate for a limited time the proceeds of the sales of the public lands of the United States and for granting lands to certain States," but it was not approved by President Jackson, who, under date of December 4, 1833, in a long message to the Twenty-third Congress,[82] set forth his reasons for withholding his signature. In that message he gave an excellent historical account of the State cessions by which the public lands had been in part acquired.

A somewhat similar act,[83] approved June 23, 1836, by President Van Buren, directed that all money in the Treasury on January 1, 1837, in excess of $5,000,000 be divided among the States in proportion to the number of their Representatives in Congress, to be paid in quarterly installments and to be returned to the United States when required by Congress. Three installments were paid, amounting in all to $28,101,644.91. Payment of the fourth installment was postponed indefinitely by act of October 2, 1837. No part of these payments has ever been returned by the States.

Other payments to States from the proceeds of land sales were authorized by act of September 4, 1841,[84] but discontinued by act of August 30, 1842.[85]

THE BOUNDARY LINES OF THE STATES[86]

MAINE[87]

The first charter that related to the area forming the present State of Maine (fig. 1) was that granted by Henry IV of France to Pierre du Gast, Sieur de Monts, in 1603, known as the charter of Acadia, which embraced the whole of North America between the 40th and 46th degrees of north latitude. Under this charter several exploring expeditions along the coast were made in 1604, 1605, and 1606 (see pl. 4); and in 1606 it was decided to make a permanent settlement at Port Royal, now Annapolis, Nova Scotia. No attempts were made under this charter to plant colonies within the limits of the present State of Maine.[88]

By the first charter of Virginia (see p. 137), granted by James I in 1606, the lands along the coast of North America between the 34th and 45th degrees of north latitude were given to two companies, to one of which, the Plymouth Company, was assigned that part of

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[82] 53d Cong., 2d sess., H. Doc. 210, pt. 3, pp. 56–69, 1896.

[83] 5 Stat. L. 55.

[84] 5 Stat. L. 453.

[85] 5 Stat. L. 567.

[86] For a condensed historical description of the boundaries of the United States see Encyclopædia Americana, vol. 4, pp. 329–342, New York, 1920. This article contains a bibliography on boundaries comprising several hundred entries.

[87] A general discussion of the boundaries of the New England States is given by S. W. Cushing (Assoc. Am. Geographers Annals, vol. 10, pp. 17–40, 1920). For reference to early voyages of the Northmen to Iceland, Greenland, and the New England coast, about the year 1000, see Preble, G. H., Origin and history of the American flag, 2d ed., pp. 160–167, Philadelphia, 1917; also Kohl, J. G., History of the State of Maine, vol. 1, ch. 2, Portland, Maine Hist. Soc., 1869.

[88] Poore, B. P., Charters and constitutions, Federal and State, p. 773, 1877. Thorpe, F. N., The Federal and State constitutions: 59th Cong., 2d sess., H. Doc. 357, vol. 3, p. 1619, 1909.

North America including the coast of New England. The first colony in Maine was planted on the peninsula of Sabino, at the mouth of the Kennebec River, now Hunnewell Point, on August 19, 1607, by George Popham.

James I in 1620 granted a charter to the Plymouth Company, in which may be found the following words: [89]

> Wee therefore, * * * Do * * * grant, ordaine and establish, that all that Circuit, Continent, Precincts, and Limitts in America, lying and being in Breadth from Fourty Degrees of Northerly Latitude, from the Equnoctiall Line, to Forty-eight Degrees of the said Northerly Latitude, and in length by all the Breadth aforesaid throughout the Maine Land, from Sea to Sea, with all the Seas, Rivers, Islands, Creekes, Inletts, Ports, and Havens, within the Degrees, Precincts, and Limitts of the said Latitude and Longitude, shall be the Limitts, and Bounds, and Precints of the second Collony: And to the End that the said Territoryes may forever hereafter be more particularly and certainly known and distinguished, our Will and Pleasure is, that the same shall from henceforth be nominated, termed, and called by the Name of New-England, in America.

Under a grant given in 1621 William Alexander, Earl of Stirling, claimed that he was entitled to land on the coast of Maine which had been granted to the Plymouth Company, and by direction of James I that company issued a patent to him [90]

> for a tract of the maineland of New England, beginning at Saint Croix and from thence extending along the sea-coast to Pemaquid and the river Kennebeck.

The heirs of the Earl of Stirling sold that tract to the Duke of York in 1663.

In 1622 Capt. John Mason and Sir Ferdinando Gorges obtained from the council of New England (Plymouth) a grant of lands lying between the Merrimack and Sagadahock [Kennebec] Rivers and extending back to the river and lakes of Canada. This tract was named the Province of Maine and included New Hampshire and the western part of Maine. Mason and Gorges, in 1629, by mutual consent divided their territory in two by Piscataqua River. That part east of this river was relinquished to Gorges, who called it Maine.

The charter of the Plymouth Company was surrendered to the King in the year 1635.

King Charles I, in 1639, granted a charter to Sir Ferdinando Gorges which virtually confirmed the patent given to him by the Plymouth Company in 1622. The following extract from that charter [91] defines the boundaries:

> All that Parte Purparte and Porcon of the Mayne Lande of New England aforesaid beginning att the entrance of Pascataway Harbor and soe to passe upp the same into the River of Newichewanocke and through the same unto the

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[89] Thorpe, F. N., op. cit., p. 1829.

[90] Idem, p. 1621.

[91] Idem, p. 1626.

furthest heade thereof and from thence Northwestwards till one hundred and twenty miles bee finished and from Pascataway Harbor mouth aforesaid Northeastwards along the Sea Coasts to Sagadahocke and upp the River thereof to Kynybequy River and through the same into the heade thereof and into the Lande Northwestwards untill one hundred and twenty myles bee ended being accompted from the mouth of Sagadahocke and from the period of one hundred and twenty myles aforesaid to crosse over Lande to the one hundred and twenty myles end formerly reckoned upp into the Lande from Pascataway Harbor through Newichewanocke River and also the Northe halfe of the Isles of Shoales togeather with the Isles of Capawock and Nawtican neere Cape Cod as alsoe all the Islands and Iletts lyeinge within five leagues of the Mayne all alonge the aforesaide Coasts betweene the aforesaid River of Pascataway and Sagadahocke with all the Creekes Havens and Harbors thereunto belonginge and the Revercon and Revercons Remaynder and Remaynders of all and singular the said Landes Rivers and Premises. All which said Part Purpart or Porcon of the Mayne Lande and all and every the Premisses herein before named Wee Doe for us our heires and successors create and incorporate into One Province or Countie

And Wee Doe name ordeyne and appoynt that the porcon of the Mayne Lande and Premises aforesaid shall forever hereafter bee called and named The Province or Countie of Mayne

In 1664 Charles II granted certain islands on the coast and a large territory west of the Connecticut River (see New York, p. 107, for the boundaries) to the Duke of York, who had the preceding year purchased a portion of the present State of Maine from the heirs of the Earl of Stirling; the latter area was for a time called Pemaquid.

In 1674 Charles II made a new grant to the Duke of York in substantially the same terms as that of 1664, including as before a portion of Maine. (See New York, p. 107.)

In the year 1677 Ferdinando Gorges, a grandson of Sir Ferdinando Gorges, sold and gave a deed of the Province of Maine to John Ushur, a merchant of Boston, for £1.250. In the same year Ushur gave a deed of the same territory to the governor and company of Massachusetts Bay, who had received a grant from the council of Plymouth in 1628, confirmed by the King in 1629.

Pemaquid and its dependencies, forming Cornwall County, under the jurisdiction of New York, were annexed to the New England government by a royal order dated September 19, 1686.[92]

The charter of Massachusetts Bay of 1629 having been canceled in 1684, William and Mary in 1691 granted a new one incorporating the Provinces of Maine and Acadia, or Nova Scotia, with the colonies of Massachusetts Bay and Plymouth, into one royal Province by the name of the Province of the Massachusetts Bay in New England. The right of government over the district of Maine thus acquired was exercised by Massachusetts until 1819, when measures were taken to admit Maine as an independent State,[93] and Congress, by act approved March 3, 1820,[94] effective March 15, 1820, admitted Maine to the Union.

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[92] Maine Hist. Soc. Coll., vol. 5, p. 4, 1857.

[93] See Massachusetts Legislature acts of June 19, 1819, and Feb. 25, 1820.

The north and east boundaries were fixed by the United States and Great Britain. (See pp. 8, 18–21.) The geographic position of the extreme north point of Maine, which falls in the middle of the St. Francis River, is latitude 47° 27′ 35.8″ N., longitude 69° 13′ 30.4″ W.[95]

The western boundary was for a long time a source of contention between Maine and New Hampshire. In 1731 commissioners from New Hampshire and from Massachusetts, who had been appointed to fix the boundary, met but were unable to agree. New Hampshire appealed to the King, who ordered that a settlement should be made by commissioners from the neighboring Provinces. The board met at Hampton in 1737. The commissioners fixed on substantially the present boundary, wording their report as follows:

> Beginning at the entrance of Pascataqua Harbor, and so to pass up the same to the River Newhichawack, and thro' the same into the furtherest head thereof, and thence run north 2 degrees west till 120 miles were finished, from the mouth of Pascataqua Harbor, or until it meets with His Majesty's other governments.[96]

This was confirmed by the King August 5, 1740.

In 1827, difficulties having again arisen about the boundary between Maine and New Hampshire, commissioners were appointed from each State to determine it. The line agreed to by the commissioners in their report, dated November 13, 1828, is thus described.[97]

> The Report of the Commissioners appointed by his Majesty's order in Council of February 22nd, 1735, and confirmed by his order of the 5th of August, 1740, having established,
>
> "That the dividing line shall pass up through the mouth of Piscataqua Harbor, and up the middle of the river of Newichwannock, part of which is now called the Salmon falls, and through the middle of the same to the farthest head thereof, &c.," and "that the dividing line shall part the Isle of *Sholes*, and run through the middle of the Harbor, between the Islands to the sea on the southerly side," &c. We have not deemed it necessary to commence our survey until we arrived north, at the head of Salmon falls river; which was determined by Bryant, at his survey in 1740, to be at the outlet of Eastpond, between the towns of Wakefield and Shapleigh. From that point we have surveyed and marked the line as follows, viz: We commenced at the Bryant rock, known as such by tradition, which is a rock in the middle of Salmon falls river, at the outlet of Eastpond, about six feet in length, three feet in breadth, three feet in depth, and two feet under the surface of the water, as the dam was at the time of the survey, to wit, October 1, 1827; said stone bears south 71° west, three rods and eight links from a large rock on the eastern bank, marked "1827," and bears also from a rock near the mill dam (marked "H") north 19° 30′ west, and distant 12 rods and 21 links. At this point the variation of the needle was ascertained to be *nine degrees* west. From the above stone the

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[94] 3 Stat. L. 544.

[95] International Boundary Commission, letter of Oct. 3, 1919.

[96] See New Hampshire Hist. Coll., vol. 2, pp. 274–278, 1827.

[97] Maine, Resolves of the Ninth Legislature, 1828–29, pp. 39–43.

line is north 7° 41′ east, 178 rods to Eastpond, and crossing the pond 311 rods in width, to a stone Monument which we erected up on the bank, about three and an half feet high above the surface of the ground, marked N on the west side and M on the east side, which description applies to all the stone monuments hereinafter mentioned, unless they are otherwise particularly described: thence the same course, 225 rods, to Fox ridge and to a stone monument, which is placed upon the north side of the road that leads from Wakefield to Shapleigh; thence 200 rods to Balch's pond—across the pond, 103½ rods—across a peninsula 36 rods—across a cove 51 rods and 17 links, across a second peninsula, 48 rods; across a second cove, 27 rods 10 links; thence 370 rods to the road leading from Newfield to Wakefield and a stone monument, erected on the north side of the same, near Campernell's house; thence north 6° 10′ east, 590 rods, to the line of Parsonfield, to a stone monument with additional mark "1828." At this point the variation of the needle was found to be 9° 15′ west. Thence same course 511 rods, crossing the end of Province pond to a stone monument on the Parsonfield road, near the house of James Andrews, also with additional mark "1828;" thence north 8° 38′ east, 208 rods to the old corner-stone of Effingham, about two feet above the ground, and not marked; thence north 8° 55′ east, 277 rods, to a large round stone about three feet diameter and two feet high, marked N and M, by the road upon Towle's Hill; thence north 7° 55′ east, 631 rods to a stone monument, on the road leading from Parsonfield to Effingham. At this point the variation of the needle was found to be 9° 30′ west; thence north 5° 02′ east, 734 rods to a pine stump, upon a small island in Ossipee river at the foot of the falls; thence north 10° east, 30 rods, to a stone monument on the north side of the new road from Porter to Effingham; thence the same course, 558 rods, to the top of Bald Mountain; thence same course, 316 rods, to the top of Bickford Mountain; thence same course 193 rods, to a stone monument on the north side of the road leading from Porter to Eaton. At this point the variation of the needle was found to be 9° 45′ west; thence north 8° 5′ east, 744 rods, to Cragged Mountain; thence same course, 67 rods, to the corner of Eaton; thence same course, 787½ rods, to the corner of Conway; thence same course, 610½ rods to a stone monument on the south side of the road leading from Brownfield to Conway centre; thence north 8° east, 871 rods, to a stone monument on the south side of the road leading from Fryeburg village to Conway—at this point the variation of the needle was found to be 10° west; thence same course, 4 rods, to a stone monument on the north side of the same road; thence north 8° 15′ east, 102 rods, to Saco river; thence same course 18 rods, across said river; thence same course 644 rods to a stone monument on the road leading to Fryeburg village, on the north side of the river. This monument is marked as before described and is about eight feet high above the ground; thence same course 142 rods to Ballard's Mill Pond; thence same course 61 rods six links across said pond; thence same course 344 rods to a stone monument on the east side of Chatham road; thence same course 690 rods to Kimball's Pond; thence same course 166 rods across said pond; thence same course 60 rods to a stone monument on the meadow.

From Kimballs Pond the line was extended northward for about 77 miles on a general course which has since been found to bear about 2° west of true north. The last mark on the line was a large yellow-birch tree on the divide between the St. Lawrence River and the rivers running south. The total distance, as measured, from this tree to Salmon River Falls was 112 miles 233 rods.

The Legislature of Maine approved the commissioners' report February 28, 1829, and the same action was taken by the Legislature of New Hampshire July 1, 1829.

Between 1828 and 1858 considerable parts of the almost unbroken forests through which the line of 1827–28 was run were cleared. Forest fires swept many large tracts of this territory, and as a consequence the marks of the 1827–28 survey for a distance of nearly 80 miles—most of which were blazed trees, only seven stone posts having been set in this distance—were obliterated, so that there remained scarcely a vestige of the original line. The adjoining lands having become valuable and litigation being imminent, the legislatures of the two States in 1858 provided for another survey from Fryeburg to the Canada line, which was made in the same year. The line as then surveyed is as follows:

> The point commenced at is an iron post situated on the line run in accordance with the "Treaty of Washington, of August 9, 1842," as the boundary between the United States and the province of Canada, at the corners of the States of Maine and New Hampshire.
>
> A large flat stone was placed on the southern face of the monument, and marked "1858—N. H., Me.," on either side of a line cut in said stone bearing the direction of the State's line, viz, south, eight degrees west. From this point the line is south eight degrees west, seventeen rods seven links to a large yellow birch stub, the northern terminus of the former survey.

The iron post above referred to is called the Crown Monument and is mark No. 475 of the International Boundary Survey of 1915. Its geographic position is latitude 45° 18′ 20.0″, longitude 71° 05′ 04.4″. The line was then run south to an old monument 60 rods north of Kimballs Pond.[98]

In 1874 the boundary line between Maine and New Hampshire was resurveyed,[99] and in 1927 the legislatures of the two States authorized a retracement and remarking of the line from Salmon Falls northward to the Canadian line.[1] This work was commenced in 1927 and completed in 1929.

NEW HAMPSHIRE

The first charter of Virginia, granted in 1606 (see p. 137), included the territory of the present State of New Hampshire, as did the charter of New England, granted in 1620 (see p. 75), and the grant to Capt. John Mason and Sir Ferdinando Gorges of 1622 (see p. 75).

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[98] The notes of this survey may be found in the New Hampshire Legislative Jour. for 1859, pp. 764–767.

[99] See Hitchcock, C. H., Geology of New Hampshire, vol. 1, p. 173, 1874.

[1] Maine, public laws of 1927, ch. 21; New Hampshire, public laws of 1927, ch. 114.

The president and council of New England made a grant to Capt. John Mason in 1629, in which the boundaries were given as follows: [2]

> All y^{t} part of y^{e} Maine land in New England lying upon y^{e} sea Coaste beginning from y^{e} Middle part of Merrimack River & from thence to proceed Northwards along y^{e} Sea coaste to passcattaway river & soe forwards up wth in y^{e} s^{d} river & to y^{e} furthest head thereof & from thence Northwestwards untill Threescore miles be finished from y^{e} ffirst entrance of passcattaway river & also from Merrimacke through y^{e} s^{d} River & to y^{e} furthest head thereof & soe forward up into y^{e} land Westwards untill Threescore miles be finished and from thence to cross over land to y^{e} Threescore miles end accounted from passacattaway river together wth all Islands & Isletts wth in five leagues distance of y^{e} premises & abutting upon y^{e} same or any parte or parcell thereof * * * w^{ch} * * * land * * * Cap^{t} John Mason wth y^{e} consent of y^{e} president & councill intends to name New Hampshire.

In 1635 the grant of 1629 was confirmed by a supplementary grant, of which the following is an extract: [3]

> All y^{t} part of y^{e} maine land of New England afores^{d} being from y^{e} middle part of Naumkeck river & from thence to proceed. East wards along y^{e} sea Coast to Cape Anne & round about y^{e} same to passcattaway harbour & soe forwards up wth in y^{e} river of Newickewanock & to y^{e} farthest head of y^{e} said river & from thence Northwards till six miles be finished from y^{e} first entrance of passcattaway harbour & alsoe from Naumkeck through y^{e} river thereof up into y^{e} land west Sixty miles from w^{ch} period to crose over land to y^{e} sixty miles end accounted from passcattaway through Newickewanock river to y^{e} land north west afores^{d} & also all y^{t} y^{e} south half of y^{e} Isles of Sholds all w^{ch} lands wth y^{e} consent of y^{e} Councill shall from henceforth be called New Hampshire & alsoe tenn thousand acres more of land in New England afores^{d} on y^{e} south east part of Sagahahock at y^{e} mouth & entrance thereof from henceforth to be called by y^{e} name of Masonia.

After the death of Capt. John Mason, in December, 1635, the affairs of the colony coming into bad condition, the colonists sought the protection of Massachusetts in 1641 and enjoyed it till 1675, when Robert Mason, a grandson of John Mason, obtained a royal decree, under which, in 1680, a colonial government was established. But no charter was given to the colony, and its government was continued only during the pleasure of the King. The commission or decree issued by the King in 1680 to John Cutt, of Portsmouth, names the following limits for the colony:

> Province of New Hampshire, lying & extending from three miles northward of Merrimack River, or any part thereof to y^{e} Province of Maine.

In the year 1690 the Province of New Hampshire was again taken under the jurisdiction of Massachusetts Bay, but in 1692 it was once more separated.

A controversy that arose between the Provinces of New Hampshire and Massachusetts Bay involved not only the boundary between New

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[2] Thorpe, F. N., op. cit., vol. 4, p. 2434.

[3] Idem, p. 2441. See article by George B. Upham in the Granite Monthly, New Hampshire State Magazine for January, 1920, on the survey in 1751 of the boundary of the Mason grant.

Hampshire and Maine (see p. 77), but also that between New Hampshire and Massachusetts, and the commissioners appointed by the two Provinces having been unable to agree, New Hampshire appealed to the King, who ordered that the boundaries should be settled by a board of commissioners appointed from the neighboring colonies. The board met at Hampton in 1737 and submitted a conditional decision to the King, who in 1740 declared in council[4]

> that the northern boundary of the province of Massachusetts be a similar curve line, pursuing the course of the Merrimack river, at three miles distance, on the north side thereof, beginning at the Atlantic Ocean, and ending at a point due north of Pautucket falls [now Lowell], and a straight line drawn from thence, due west, till it meets with his Majesty's other Governments.

New Hampshire had claimed her southern boundary to be a line due west from a point on the sea 3 miles north of the mouth of the Merrimack River. Massachusetts had claimed all the territory within 3 miles north of any part of the Merrimack River. The King's decision gave to New Hampshire a strip of territory more than 50 miles in length and of varying width in excess of that which she claimed. This decree of the King was forwarded to Mr. Belcher, then governor of both the Provinces of New Hampshire and Massachusetts Bay, with instructions to apply to the respective assemblies to unite in making the necessary provisions for running and marking the line comformably to the said decree, and if either assembly refused, the other was to proceed ex parte. Massachusetts Bay declined to comply with this requisition. New Hampshire therefore proceeded alone to run and mark the line.

George Mitchell and Richard Hazzen were appointed by Governor Belcher to survey and mark the line. Pursuant to this authority, in February, 1741, Mitchell ran and marked the line from a point on the seacoast about 3 miles north of the mouth of the Merrimack River to a point about 3 miles north of the Pawtucket Falls, and Hazzen, in March following, ran and marked a line from the point 3 miles north of Pawtucket Falls across the Connecticut River to the supposed boundary line of New York, on what he then assumed to be a due west course from the place of beginning. He was instructed by Governor Belcher to allow for a westerly variation of the needle of 10°.[5] The report of the surveyors has not been preserved, but the journal of Hazzen has been found and published.[6]

Subsequent investigation has proved that Hazzen's line was not run on a due west course, the allowance for the westerly variation of the needle being too large, throwing the line north of west. This mistake seems to have been known prior to the Revolution. In 1774

Slade, William, jr., Vermont State papers, p. 9, J. W. Copeland, printer, 1823.

[5] New Hampshire H. R. Jour., 1826, p. 303.

[6] New England Hist. and Geneal. Register, July, 1879, p. 323.

calculations were made by George Sproule, founded upon actual surveys and accurate astronomical observations, from which he determined that Hazzen's line was so far north of west as to lose to the State of New Hampshire a tract of land computed at 59,872 acres.[7]

In 1825 commissioners were appointed by the States of New Hampshire and Massachusetts to ascertain, run, and mark the line between the two States, under the proceedings of which New Hampshire asserted her claim to a due west line, conformable to the decree of 1740, it being apparent by a survey made by the commissioners that the original line was north of west. The Massachusetts commissioners refused to run such a line, alleging that they were empowered only to ascertain and mark the original line.

On March 10, 1827, the Legislature of Massachusetts passed a resolution providing for the erection of durable monuments to preserve the boundary line between the States of Massachusetts and New Hampshire, as the same had been run and ascertained by the commissioners,[8] and monuments were erected accordingly.

In 1885 the joint commission appointed by the States of New Hampshire and Massachusetts re-ran and marked the curved portion of the boundary following the course of the Merrimack River, changing it only to a trifling extent. This commission was, however, unable to agree upon the boundary west of Pawtucket Falls. The matter dragged along until finally in 1894 this commission, together with a commission representing Vermont, agreed to maintain the Hazzen line, and this line was retraced and re-marked from Pawtucket Falls to the northwest corner of Massachusetts.

Under the King's decree of 1740 the Province of New Hampshire claimed jurisdiction as far west as the territory of Massachusetts and Connecticut extended, thus including the present State of Vermont. New York claimed all the country west of the Connecticut, under the charters of 1664 and 1674 to the Duke of York. A bitter controversy ensued. In 1749 the Governor of New Hampshire wrote to the Governor of New York as follows:[9]

> PORTSMOUTH, *November 17, 1749*.
>
> I think it my duty * * * to transmit to your Excellency the description of New-Hampshire, as the King has determined it in the words of my commission, * * * In consequence of His Majesty's determination of the boundaries between New Hampshire and Massachusetts, a surveyor and proper chainmen were appointed to run the western line from 3 miles north of Pawtucket Falls; and the surveyor, upon oath, has declared that it strikes Hudson's River, about eighty poles north of where Mohawk's River comes into Hudson's River.
>
> B. WENTWORTH.

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[7] New Hampshire H. R. Jour., 1826, p. 304; see also Williams, Samuel, Natural and civil history of Vermont, p. 379, Walpole, N. H., 1794, for list of magnetic declinations in Eastern States of America, 1646–1788.

[8] See Massachusetts Legislature Resolves, 1827.

[9] Slade, William, jr., op. cit., p. 10.

The following is the description of the south boundary of New Hampshire as given by King George II to Benning Wentworth when Wentworth was appointed governor, July 3, 1741:[10]

> province of New Hampshire, within our Dominions of New England in America, bounded on the south side by a simular Curve line pursuing the Course of the Merrimac River at three miles distance, on the North side therof, beginning at the Atlantick Ocean & ending at a point due North of a place called Pautucket Falls, and by a Straight Line drawn from thence due West Cross the said River 'till it meets with our other Governments,

The south boundary of New Hampshire as surveyed between 1885 and 1898 is marked by 50 large cut-granite monuments at irregular intervals. The initial point of this survey is the southwest corner of New Hampshire and southeast corner of Vermont, marked by a copper bolt in the top of a block of granite set in a mass of concrete 6 feet square, "at or near ordinary low-water line" on the west bank of the Connecticut River, the geographic position of which is latitude 42° 43′ 37.21″, longitude 72° 27′ 32.08″. A witness mark of polished granite, suitably inscribed, stands on the Massachusetts-Vermont line, 582 feet, N. 87° 48′ W. from the corner.

From the State corner the line was run on a general course about 2½° south of east (true bearing), measured distance of 57.84 miles to

> the boundary pine monument, so-called, standing between the towns of Pelham, New Hampshire, and Dracut, Massachusetts, in the pasture land owned by Zachariah Coburn, at a point where one George Mitchell, surveyor, marked a pitch pine tree, March 21, 1741, then supposed to be 3 miles due north of a place in the Merrimack River formerly called Pawtucket Falls, now Lowell.

This monument is also granite, and its geographic position is latitude 42° 41′ 50.25″, longitude 71° 19′ 22.02″.

From this point the boundary consists of a series of straight lines, approximately paralleling Merrimack River and 3 miles distant therefrom.

The terminal mark is a granite monument 42 by 14 by 12 inches in size, marked $\overset{\text{S}}{\underset{1890}{\text{Mass.}}}$ on its south face and $\overset{\text{S}}{\underset{1890}{\text{N. H.}}}$ on its north face, which stands on Salisbury Beach about 80 feet from high-water line and 250 feet from low-water line of the Atlantic Ocean. Its geographic position is latitude 42° 52′ 19.28″, longitude 70° 49′ 02.94″. From this point the boundary extends for "three miles * * * to the limit of State jurisdiction" on a course 86° 07′ 30″ E.

This survey was approved by Massachusetts[11] and by New Hampshire.[12] The acts of the State legislatures give the complete notes of the surveys. Copies of the notes and many geographic positions on the lines are given in the town boundary atlases prepared by the harbor and land commission of Massachusetts.

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[10] Documentary history of New York, vol. 4, p. 331, 1851.

[11] Act of May 12, 1899, ch. 369.

[12] Act of Mar. 22, 1901, ch. 115.

The question concerning the western boundary of New Hampshire was submitted to the King, who in 1764 made the following decree:[13]

AT THE COURT OF ST. JAMES,
The 20th day of July, 1764.

Whereas there was, this day read at the board, a report made by the Right Honorable the Lords of the Committee of council for plantation affairs, dated the 17th of this instant, upon considering a representation from the Lords Commisioners for trade and plantations, relative to the disputes that have, some years subsisted between the provinces of New-Hampshire and New-York, concerning the boundary line between those provinces—His Majesty, taking the same into consideration, was pleased with the advice of his privy council, to approve of what is therein proposed, and doth accordingly, hereby order and declare the western banks of the river Connecticut, from where it enters the Province of the Massachusetts Bay, as far north as the forty-fifth degree of northern latitude, to be the boundary line between the said two provinces of New Hampshire and New York. Wherefore the respective Governors and Commanders in Chief of his Majesty's said Provinces of New-Hampshire and New-York, for the time being, and all others whom it may concern, are to take notice of His Majesty's pleasure hereby signified and govern themselves accordingly.

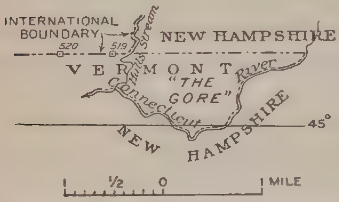

FIGURE 7.—Map of the Gore, at the northeast corner of Vermont

Notwithstanding this decree of the King controversy attended with violence was kept up for many years, but the line was finally accepted and now forms the boundary between the States of New Hampshire and Vermont. (See p. 87.)

The northern boundary of New Hampshire was fixed by the British treaty of 1842 (p. 18) and is described as follows:

Commencing at the "Crown Monument," so called,[14] at the intersection of the New Hampshire, Maine, and Province of Quebec boundaries, in latitude 45° 18′ 20″, longitude 71° 05′ 04″, thence by an irregular line along the divide to the head of Halls Stream and down the middle of that stream to a line established by Valentine and Collins previous to 1774 as the 45th parallel of latitude.

The end of this line in the middle of Halls Stream is in latitude 45° 00′ 48.7″, longitude 71° 30′ 05.7″. The New Hampshire-Vermont line then runs east for about 1¾ miles to the west bank of the Connecticut River, the approximate position of which is latitude 45° 00′ 50″, longitude 71° 27′ 57″. This small area east of Halls Stream, known locally as "The Gore" (see fig. 7), is often incorrectly shown as a part of New Hampshire.

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[13] Slade, William, jr., op. cit., p. 19; Documentary history of New York, vol. 4, p. 355, 1851.

[14] Now monument 475 of the International Boundary Commission.

A historical description of the boundaries of New Hampshire is given by Harriman.[15]

The title to the New Hampshire area in the vicinity of the Connecticut Lakes and north of the 45th parallel was for many years in dispute between New Hampshire and Canada. In 1829 the settlers in that locality organized an independent republic, which was called the Indian Stream Territory. Local government was in effect until after the Indian Stream War, in 1835, when New Hampshire took control.[16]

VERMONT

The grants from King Henry of France in 1603 and King James of England in 1606 both included the territory which forms the present State of Vermont. It was also included in the charter of New England of 1620.

In the grants to the Duke of York in 1664 and 1674 all the territory between the Connecticut and Delaware Rivers was included. New York therefore claimed jurisdiction of the territory now known as Vermont. (See fig. 8.) Massachusetts, however, had made claim at an early period to the tract west of the Connecticut River now forming a portion of that State and claimed also the greater part of the Vermont territory.

By the terms of the charter of Massachusetts Bay, of 1629, that colony was granted all the lands

> which lye, and be within the space of three English Myles to the Northward of the said River called Monomack alias Merrymack, or to the Northward of any and every Parte thereof.[17]

Under this clause Massachusetts Bay claimed that its jurisdiction extended to a line 3 miles north of the northernmost part of the Merrimack River, which would embrace a large portion of New Hampshire and Vermont. New Hampshire contested this claim and after several years' controversy was more than sustained by a decision of the King in 1740. (See p. 81.) New Hampshire in turn claimed the territory of Vermont on the ground that as Massachusetts and Connecticut had been allowed to extend their boundaries within 20 miles of the Hudson River its territory should go equally far, and contended that the King's decree of 1740 left that fairly to be inferred; also that the old charters of 1664 and 1674 were obsolete. By a decree of the King, however, the territory west of the Connecticut River, from the 45th parallel to the Massachusetts line, was declared to belong to the Province of New York. (See New Hampshire, p. 84.) As most of the settlers of Vermont were from New Hampshire, this decision of the King caused great dissatisfaction, and the Revolution found Vermont the scene of conflicting claims and the theater of violent acts, some culminating in actual bloodshed.

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[15] Harriman, Walter, The history of Warner, N. H., pp. 550–581, Concord, 1879.

[16] See Bacon, E. M., The Connecticut River and the Valley of the Connecticut, pp. 369–370, New York, 1906; and Faris, J. T., The romance of the boundaries, pp. 33–43. New York, 1926. For a historical sketch of the area see 25th Cong., 3d sess., H. Rept. 176, Jan. 16, 1839.

[17] Thorpe, F. N., op. cit., vol. 3, p. 1847.

On January 15, 1777, delegates representing 51 towns comprised in the territory known as the "New Hampshire grants," on the west side of the Green Mountains, declared the area an independent State,[18] to be called "New Connecticut, alias Vermont," but the title generally used in official papers for several years thereafter was "the New Hampshire grants." Sixteen towns in New Hampshire sought union with the new State, but this action was vigorously opposed by New Hampshire and was not approved by the Continental Congress. Massachusetts agreed to the independence of Vermont in 1781, and New Hampshire adjusted its differences with that State in 1782, but 8 years more passed before New York consented to the admission of Vermont to the Union. Vermont in the meantime had fixed upon a western boundary practically the same as at present, which was then described by reference to town boundaries as far north as the Poultney River, thence down the middle channel of that river to East Bay and northward to and through the middle of the deepest channel of Lake Champlain.[19]

Vermont was admitted as an independent State by an act approved February 18, effective March 4, 1791.[20]

In 1767 astronomic observations were made on the eastern shore of Lake Champlain, and a mark was set at the supposed position of the 45th parallel. From this point Valentine and Collins in 1772 surveyed and marked a line as far east as the Connecticut River for the eastern part of the northern boundary of the Province of New York (now the State of Vermont). Recent surveys show that this boundary for its entire length is from a quarter of a mile to 1.1 miles north of the 45th parallel,[21] but by the convention between the United States and Great Britain of 1842 the line as marked west of Halls Stream to the deepest part of Lake Champlain was agreed upon as part of the boundary of the United States. The northwest corner of Vermont, which is the northeast corner of New York, falls in Lake Champlain at latitude 45° 00′ 38.9″, longitude 73° 20′ 38.9″.

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[18] See Fourteenth Census, vol. 1, p. 27, note 50, 1921, "Vermont; Independent republic of Vermont admitted to the Union as a State in 1791."

[19] Slade, William, jr., op. cit., pp. 69–70, 193.

[20] 1 Stat. L. 191.

[21] In an official report to the Governor of Vermont made in 1806, Samuel Waters declared that his observations showed that the boundary of Vermont near its eastern terminus was 6′ 14″ south of the 45th parallel, a statement which was grossly in error, if he referred to the geographic latitude.

Joint resolutions by the Legislature of the State of Vermont, approved November 22, 1912, and February 13, 1913,[22] authorized the institution of a suit in the Supreme Court of the United States for the determination of the position of the boundary line between that State and New Hampshire. Vermont in its bill of complaint filed at the October term, 1915, asked that the New Hampshire boundary line be declared to be in the middle of the Connecticut River; New Hampshire in its reply asked that the boundary be fixed at the high-water line on the west bank of the river, also that the north boundary of Vermont end at Halls Stream, instead of at the Connecticut River 1¾ miles farther east. This case has not yet been decided.

The south boundary of Vermont is part of the north boundary of Massachusetts, which was fixed by the King in council under date of August 5, 1740, and surveyed under the direction of Governor Belcher in 1741. It was resurveyed and re-marked by commissioners representing the two States between 1885 and 1898. This survey was commenced at the northwest corner of Massachusetts, at a monument consisting of a granite post 8 feet long and 14 inches square set nearly 5 feet in the ground. The faces toward the different States were marked "N. Y. 1898," "Mass. 1896," and "Vt. 1896." Its geographic position is latitude 42° 44′ 45.20″, longitude 73° 15′ 54.90″. From this point the boundary is a nearly straight line, bearing about 2° south of east (true bearing), and runs 41 miles to the southeast corner of Vermont, which is a mark on the west bank of the Connecticut River. A description of this mark is given on page 83.[23]

The line between Vermont and New York was surveyed and marked by commissioners from the two States in 1814 and is as follows:[24]

> Beginning at a red or black oak tree, the northwest corner of Massachusetts, nd running north 82° 20′ west as the magnetic needle pointed in 1814, 50 hains, to a monument erected for the southwest corner of the State of Vermont, * * * which monument stands on the brow of a high hill, descendng to the west, then northerly in a straight line to a point which is distant 10 hains, on a course south 35 degrees west, from the most westerly corner of a ot of land distinguished in the records of the town of Pownal, in the State f Vermont, as the fifth division of the right of Gamaliel Wallace, and which, n the year 1814, was owned and occupied by Abraham Vosburgh; then north

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[22] Acts and resolves passed by the General Assembly of the State of Vermont at the session of 1912, pp. 627–628.

[23] The full notes of this survey are given in the State acts ratifying it (Massachusetts cts of 1900, ch. 131, and Vermont Acts of 1900, ch. 137); also in the folio atlases of the arbor and land commission of Massachusetts. See report of the commissioners (Massachusetts H. Doc. 300, 1900).

[24] New York Rev. Stat., 6th ed., vol. 1, pp. 122–123, Banks & Brothers, 1875; 7th ed., vol. 1, p. 128, 1882.

35 degrees east, to said corner and along the westerly bounds of said lot, 30 chains, to a place on the westerly bank of Hosick River where a hemlock tree heretofore stood, noticed in said records as the most northerly corner of said lot; then north 1 degree and 20 minutes west, 6 chains to a monument erected by the said commissioners, standing on the westerly side of Hosick River, on the north side of the highway leading out of Hosick into Pownal, and near the northwesterly corner of the bridge crossing said river; then north 27 degrees and 20 minutes east, 30 chains, through the bed of the said river, to a large roundish rock on the northeasterly bank thereof; then north 25 degrees west, 16 chains and 70 links; then north 9 degrees west, 18 chains and 60 links, to a white oak tree, at the southwest corner of the land occupied in 1814 by Thomas Wilsey; then north 11 degrees east, 77 chains, to the north side of a highway, where it is met by a fence dividing the possession of said Thomas Wilsey, jr., and Emery Hunt; then north 46 degrees east, 6 chains; then south 66 degrees east, 26 chains and 25 links; then north 9 degrees east, 27 chains and 50 links, to a blue-slate stone, anciently set up for the southwest corner of Bennington; then north 7 degrees and 30 minutes east, 46 miles 43 chains and 50 links, to a bunch of hornbeam saplings on the south bank of Poultney River, the northernmost of which was marked by said last-mentioned commissioners, and from which a large butternut tree bears north 70 degrees west, 30 links, a large hard maple tree, south 2 chains and 86 links, and a white ash tree on the north side of said river, north 77 degrees east.

* * * then down the said Poultney River, through the deepest channel thereof, to East Bay; then through the middle of the deepest channel of East Bay and the waters thereof to where the same communicate with Lake Champlain; then through the middle of deepest channel of Lake Champlain to the eastward of the islands called the Four Brothers, and the westward of the islands called the Grand Isle and Long Isle, or the Two Heroes, and to the westward of the Isle La Motte to the line in the 45th degree of north latitude, established by treaty for the boundary line between the United States and the British Dominions.

This line was changed in 1876 by a cession from Vermont to New York of a very small area west of the village of Fair Haven and opposite the mouth of the Castleton River which had been left on the west side of the Poultney River by a change in the course of that stream, described as follows:

All that portion of the town of Fairhaven, in the county of Rutland and State of Vermont, lying westerly from the middle of the deepest channel of Poultney River, as it now runs, and between the middle of the deepest channel of said river and the west line of the State of Vermont as at present established.

This cession was ratified by Congress April 7, 1880.[25]

The Vermont-New York line was resurveyed and re-marked in 1904 from the Massachusetts-Vermont-New York corner north to the Poultney River.[26] There are now 101 substantial stone monuments on this line, which is 54.6 miles in length.

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[25] 21 Stat. L. 72.

[26] For a report of the survey, a plat of the line, and descriptions and coordinates of each mark, see New York State Engineer and Surveyor Rept. for 1904, pp. 301–345

MASSACHUSETTS[27]

The territory of Massachusetts was included in the first charter of Virginia, granted in 1606, and in the charter of New England, granted in 1620.

In 1628 the council of Plymouth made a grant to the governor and company of Massachusetts Bay in New England, which was confirmed by the King, and a charter was granted in 1629, from which the following are extracts:[28]

> * * * Nowe, Knowe Yee, that Wee * * * have given and graunted * * * all that Parte of Newe England in America which lyes and extendes betweene a greate River there com̄onlie called Monomack River, alias Merrimack River, and a certen other River there, called Charles River, being in the Bottome of a certen Bay there, comonlie called Massachusetts, alias Mattachusetts, alias Massatusetts Bay; and also all and singuler those Landes and Hereditament whatsoever, lying within the Space of Three English Myles on the South Parte of the said River, called Charles River, or of any, or every Parte thereof; and also all and singuler the Landes and Hereditaments whatsoever, lying and being within the space of Three Englishe Myles to the southward of the Southermost Parte of the said Baye, called Massachusetts, alias Mattachusetts, alias Massatusets Bay; and also, all those Landes and Hereditaments whatsoever, which lye and be within the Space of Three English Myles to the Northward of the saide River, called Monomack, alias Merrymack, or to the Norward of any and every Parte thereof, and all Landes and Hereditaments whatsoever, lyeing within the Lymitts aforesaide, North and South, in Latitude and Bredth, and in Length and Longitude, of and within all the Bredth aforesaide, throughout the mayne Landes there, from the Atlantick and Westerne Sea and Ocean on the East Parte, to the South Sea on the West Parte;
>
> * * * Provided alwayes, That if the said Landes * * * were at the tyme of the graunting of the saide former Letters patents, dated the Third Day of November, in the Eighteenth Yeare of our said deare Fathers Raigne aforesaide, actuallie possessed or inhabited by any other Christian Prince or State, or were within the Boundes, Lymytts or Territories of that Southerne Colony, then before graunted by our said late Father * * * That then this present Graunt shall not extend to any such partes or parcells thereof, * * * but as to those partes or parcells * * * shal be vtterlie voyd, theis presents or any Thinge therein conteyned to the contrarie notwithstanding. * * *

The charter of New England was surrendered to the King in 1635.[29]

The charter of Massachusetts Bay, granted in 1629, was canceled by a judgment of the high court of chancery of England, June 18, 1684.

In 1686 Pemaquid (part of the present State of Maine) and its dependencies were annexed to the New England government.

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[27] The full legal name for Massachusetts is "The Commonwealth of Massachusetts."

[28] Thorpe, F. N., op. cit., vol. 3, p. 1849.

[29] Idem, p. 1860.

In 1691 a new charter was granted to Massachusetts Bay, which included Plymouth Colony and the Provinces of Maine and Nova Scotia. The following are extracts from this charter:[30]

> * * * Wee doe * * * will and Ordeyne that the Territories and Collnyes comonly called or known by the Names of the Collony of the Massachusetts Bay and Collony of New Plymouth the Province of Main the Territorie called Accadia or Nova Scotia and all that tract of land lying betweene the said Territories of Nova Scotia and the said Province of Main be Erected Vnited and Incorporated * * * into one reall Province by the Name of Our Province of the Massachusetts Bay in New England. * * * all that parte of New England in America lying and extending from the greate River comonly called Monomack als Merrimack on the Northpart and from three Miles Northward of the said River to the Atlantick or Western Sea or Ocean on the South part And all the Lands and Hereditaments whatsoever lying within the limits aforesaid and extending as farr as the Outermost Points or Promontories of Land called Cape Cod and Cape Mallabar North and South and in Latitude Breadth and in Length and Longitude of and within all the Breadth and Compass aforesaid throughout the Main Land there from the said Atlantick or Western Sea and Ocean on the East parte towards the South Sea or Westward as far as Our Collonyes of Rhode Island Connecticut and the Marragansett Countrey all alsoe all that part or porcon of Main Land beginning at the Entrance of Pescata way Harbour and soe to pass vpp the same into the River of Newickewannock and through the same into the furthest head thereof and from thence Northwestward till One Hundred and Twenty miles be finished and from Piscata way Harbour mouth aforesaid North-Eastward along the Sea Coast to Sagadehock and from the Period of One Hundred and Twenty Miles aforesaid to crosse over Land to the One Hundred and Twenty Miles before reckoned vp into the Land from Piscataway Harbour through Newickawannock River and alsoe the North halfe of the Isles and Shoales together with the Isles of Cappawock and Nantukett near Cape Cod aforesaid and alsoe [all] Lands and Hereditaments lying and being in the Countrey and Territory comonly called Accadia or Nova Scotia And all those Lands and Hereditaments lying and extending betweene the said Countrey or Territory of Nova Scotia and the said River of Sagadahock or any part thereof And all Lands Grounds Places Soiles Woods and Wood grounds Havens Ports Rivers Waters and other Hereditaments and premisses whatsoever, lying within the said bounds and limitts aforesaid and every part and parcell thereof and alsoe all Islands and Isletts lying within tenn Leagues directly opposite to the Main Land within the said bounds. * * *

The present northern boundary of Massachusetts was first surveyed and marked in 1741. (See New Hampshire, p. 83, and Vermont, p. 87.)

The east-west part of the boundary between Massachusetts and Rhode Island is a part of the original southerly line of the territory granted by the council at Plymouth to Sir Henry Roswell and others in the third year of the reign of King Charles I and redefined in the charter granted to the colony of Massachusetts Bay in 1691. This line was for more than 200 years a matter of dispute that was in some respects the most remarkable boundary question with which this country has had to deal. Twice the question went to the Supreme Court of the United States, and in one of these suits Daniel Webster and Rufus Choate were employed as counsel for Massachusetts. Choate, in order to illustrate the indefiniteness of certain boundary lines, said before the Massachusetts Legislature:

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[30] Thorpe, F. N., op. cit., vol. 3, p. 1876.

> The commissioners might as well have decided that the line between the States was bounded on the north by a bramble bush, on the south by a blue jay, on the west by a hive of bees in swarming time, and on the east by five hundred foxes with fire brands tied to their tails.

As early as 1642 the line between the two colonies was marked in part by Nathaniel Woodward and Solomon Saffrey, who set up on the plain of Wrentham a stake as the commencement of the line between Massachusetts Bay and Rhode Island. This stake was by them supposed to mark a point 3 miles south of the Charles River.

In 1710–11 commissioners appointed from Massachusetts and Rhode Island agreed upon the north line of Rhode Island, and their action was approved by the legislatures of both colonies. The agreement was as follows:[31]

> That the stake set up by Nathaniel Woodward and Solomon Saffrey, skilful, approved artists, in the year of our Lord one thousand six hundred and forty-two, and since that often renewed, in the latitude of forty-one degrees and fifty-five minutes, being three English miles distant southward from the southernmost part of the river called Charles River, agreeable to the letters-patent for the Massachusetts province, be accounted and allowed on both sides the commencement of the line between Massachusetts and the colony of Rhode Island * * *

In 1719 this line was run by commissioners appointed for the purpose, but subsequent investigation has shown that it was run very inaccurately.[32]

The line between Massachusetts and the eastern part of Rhode Island was fixed by the commissioners in 1741. The colony of Rhode Island appealed from their decision to the King, but in 1746 he affirmed it by a royal decree.[33] In accordance with this decree the line was run in 1746 by commissioners of Rhode Island whose report may be found in the United States Supreme Court records for the December term, 1852, pages 208–210.

In 1748 the Legislature of Rhode Island appointed commissioners to continue the line to the Connecticut corner, recognizing the Woodward and Saffrey stake as the place of beginning. Massachusetts failed to appoint commissioners, whereupon the Rhode Island commissioners proceeded to complete the running of the line. In their report they say with reference to the initial point of their survey:[34]

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[31] 4 Howard 631.

[32] Rhode Island Acts, May, 1867, pp. 6 et seq.

[33] Certified copies of the proceedings in council and of the royal decree were among the documents presented to the U. S. Supreme Court, December term, 1852, original No. 3, pp. 200–208; also published in U. S. Geol. Survey Bull. 226, pp. 56–59.

> That we, not being able to find any stake or other monument which we could imagine set up by Woodward and Saffrey, but considering that the place thereof was described in the agreement mentioned in our commission, by certain invariable marks, we did proceed as followeth, namely: We found a place where Charles River formed a large current southerly, which place is known to many by the name of Poppatolish Pond, which we took to be the southernmost part of said river, from the southernmost part of which we measured three English miles south, which three English miles did terminate upon a plain in a township called Wrentham.

From this time forward repeated steps were taken by Rhode Island, by resolutions and by appointment of commissioners, to ascertain and run the line in connection with commissioners from Massachusetts. Commissioners from both colonies met more than once, but they failed to agree upon a boundary in place of that established under the agreements of 1711 and 1718. As a ground for these efforts Rhode Island alleged that a mistake had been made by her commissioners in commencing the line at the accepted position of the Woodward and Saffrey stake, which, as set on Wrentham Plain, at Burnt Swamp Corner, was considerably more than 3 miles south of the Charles River.[35]

This controversy, however, embraced the entire line from the State of Connecticut to the Atlantic Ocean. Massachusetts asserted that an encroachment had been made on her territory from Burnt Swamp Corner to the ocean by Rhode Island, who, on her part, claimed that the jurisdictional line of Massachusetts from that corner to the Connecticut line was, in its whole extent, upon the territory of Rhode Island. The legislatures of the respective States having failed after repeated efforts to adjust the controversy, Rhode Island in 1832, by a bill in equity, brought the subject of the northern boundary from Burnt Swamp Corner to the Connecticut line before the Supreme Court of the United States, which in 1846 decided that the jurisdictional line claimed by Massachusetts was the legal boundary of the two States between these points.

While this suit was pending an attempt was made to settle the long controversy by an amicable adjustment of the whole line from the Connecticut corner to the ocean. Commissioners were appointed by both States in 1844 to ascertain and mark the true boundary from Pawtucket Falls (presumably near the present city of Pawtucket) south to Bullock Neck. In 1845 the same commissioners were authorized to ascertain the entire line from Burnt Swamp Corner to the Atlantic Ocean.

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[34] 4 Howard 632.

[35] 14 Peters 273.

In 1846, the equity suit having been decided,[36] they were authorized "to erect suitable monuments at the prominent angles of the line, from the Atlantic Ocean to the northwest corner of Rhode Island, and at such other points on the line as may subserve the public convenience." A majority of the commissioners agreed upon a line and erected monuments in 1847.[37]

The report of the joint commission was dated Boston, January 13, 1848. The line so agreed upon as a boundary between Burnt Swamp Corner and the northwest corner of Rhode Island was a straight line, varying a little from the irregular jurisdictional line established by the decision of the Supreme Court, and is described in the report of the commissioners, as follows:

> Begin at the northwest corner of Rhode Island, on Connecticut line, in latitude 42° 00′ 29″ north, and longitude 71° 48′ 18″ west of Greenwich, thence easterly in a straight line 21.512 miles to Burnt Swamp Corner, in Wrentham, being in latitude 42° 01′ 08″ and longitude 71° 23′ 13″. [See p. 95 for corrected position.]

Upon this line 27 monuments were placed exclusive of that at Burnt Swamp Corner.

The General Assembly of Rhode Island, in May, 1847, ratified and established the line from the ocean to the Connecticut line, "to take effect and become binding whenever the said agreement and boundary line should be ratified by the State of Massachusetts." The Legislature of Massachusetts did not ratify the agreement and boundary line but proposed another joint commission, which was agreed to by Rhode Island. The attempt made by these commissioners to settle the line having failed, Massachusetts commenced a bill in equity before the Supreme Court of the United States for an adjudication of the boundary line from Burnt Swamp Corner to the Atlantic Ocean.

In 1860 both States agreed upon a conventional line and asked that a decree of the United States Supreme Court should confirm the same. The prayer was granted, and the line was thus finally established by a decree rendered December 16, 1861.[38]

The Supreme Court decision made no reference to the line from Burnt Swamp Corner to the Connecticut line. In 1865 the Legislature of Massachusetts took action in regard to this portion of the line, as follows:

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[36] 4 Howard 591.

[37] See copy of agreement in Documents relating to the boundary line and disputed territory between Massachusetts and Rhode Island, p. 39, Fall River, Henry Pratt, printer, 1847.

[38] A full discussion of the Massachusetts-Rhode Island boundary disputes, reports of commissioners, legislative acts, etc., may be found in Massachusetts H. Doc. 102 of 1861, Doc. 3 of 1869, Doc. 1230 of 1899; in Rhode Island Acts, May, 1867; and in U. S. Supreme Court Rec. No. 3, December term of 1852.

Resolved, That the boundary line between the State of Rhode Island and the Commonwealth of Massachusetts, from the line of the State of Connecticut to Burnt Swamp Corner, begins at the north west corner of the State of Rhode Island on the Connecticut line, in latitude 42° 00′ 29″ north, and longitude 74° 48′ 18″ [39] west of Greenwich, and runs in a straight line 21 and $\frac{512}{1000}$ miles to Burnt Swamp Corner, in Wrentham, being in latitude 42° 1′ 8″.60 and longitude 71° 23′ 13″.26. [See p. 95 for corrected position for this mark.]

This is the line agreed upon by commissioners and called the "line of 1848," which was ratified by Rhode Island when run but rejected by Massachusetts.

As a result of the tardiness of Massachusetts in ratifying the line, Rhode Island rejected it on the ground that the then recent settlement of the eastern boundary by the decree of the Supreme Court had so changed the aspect of the controversy that she could not consent to the adoption of the line of 1848 as her northern boundary. Thus the northern boundary of Rhode Island was left in the condition prescribed by the Supreme Court decision of 1846.

In June, 1880, the Legislature of Rhode Island passed a resolution to remove the monuments of the "line of 1848" and erect monuments on the jurisdictional line. In 1881 the Legislature of Massachusetts took like action. This jurisdictional line has the same termini as the line of 1848 but is a very irregular line, in places running north of a direct line and elsewhere falling south of it, the extreme variations being 529.3 feet north and 129 feet south. It is described as follows: [40]

Beginning at a monument of dressed granite, marked "Mass." on the north, "R. I." on the south, and "Con." on the west sides, standing at the northwest corner of the State of Rhode Island, in latitude 42° 00′ 29.45″, longitude 71° 48′ 18.07″ west of Greenwich; thence running easterly in a straight line to a pile of stones on the westerly bank of Wallum pond at high-water mark; thence easterly in a straight line to the southwest corner of Uxbridge and the southeast corner of Douglas, to a monument of dressed stone, marked "D Nov. 9, 1829," on northwest face and "U" on east face, and "B" on south face; thence running easterly in a straight line to a point formed by the intersection of the easterly line of Harris Avenue, so called, with the southerly line of Gaskill Street near the bridge of Waterford, and about fifteen rods easterly of the easterly bank of the Blackstone River; thence running easterly in a straight line to a monument of split stone granite about five feet above ground, having five faces, marked on the west face "M," on the northeast face "B," and on the south face "C"; thence easterly in a straight line to the stone monument now standing on Wrentham Plain at Burnt Swamp Corner, * * * marked on two sides Mass. and on the other two sides R. I.

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[39] This is a clerical error. "Longitude 74° 48′ 18″" should read "longitude 71° 48′ 18″."

[40] Massachusetts Laws for 1883, ch. 154, approved Apr. 30, 1883. Rhode Island act approved Mar. 22, 1883.

The following statement concerning the east boundary of Rhode Island was made by commissioners of 1897–98 for both States:[41]

> On March 1, 1862, a decree of the Supreme Court of the United States issued the previous year became effective, which changed the boundary line between the Commonwealth of Massachusetts and the State of Rhode Island. By this change the town of Pawtucket west of the Seven and Ten Mile rivers, a narrow strip of Seekonk between the middle of the above-named rivers and the line of highest water on the eastern banks, and the southwestern part of Seekonk, now East Providence, were annexed to Rhode Island, in exchange for territory in the vicinity of Fall River. The Legislature of Massachusetts anticipating this change, provided by chapter 187 of the acts of 1861 for the proper jurisdiction of the territory east of this new boundary, and the State of Rhode Island by a similar act, chapter 379 of the acts of 1861, provided for the jurisdiction of the new territory acquired west of this line.
>
> On account of the imperfect marking of this line and the difficulty of defining the high-water lines of rivers and ponds, which formed the State boundary, it was decided in 1897 to redefine the line and to substitute for indefinite high-water boundaries a series of straight lines as near as may be to the line established by the decree of 1861, which could be readily and permanently marked.
>
> The general court of that year authorized the topographical survey commission, representing Massachusetts, to act in conjunction with a commission representing Rhode Island, in locating, defining, and marking the State boundary line, from "Burnt Swamp Corner" southerly to the sea.

A full report of the doings of these commissions was made in May, 1899, and the general courts of both States promptly ratified their work by the passage of acts which contain a full description of the line.[42]

The 1898 survey of the east boundary of Rhode Island was commenced at Burnt Swamp Corner, marked by a granite monument inscribed "Mass.-R. I. 1861–1883; 1898," in latitude 42° 01′ 08.35″ and longitude 71° 22′ 54.51″. The line thence runs S. 2′ 40″ W. 8.65 miles, thence east and south by straight-line courses of irregular length to a point where it intersects the line of high water of the Atlantic Ocean, in latitude 41° 29′ 50.87″, longitude 71° 07′ 15.62″, about 45.789 miles from the point of beginning. The termini of all the straight lines are marked by the old monuments where recovered or by new granite monuments 12 by 12 inches by 9 feet 6 inches, suitably lettered and set 5½ feet in the ground.

In 1713 commissioners from the Province of Massachusetts Bay and Colony of Connecticut adopted a line between Massachusetts and Connecticut. By this line the frontier towns of Woodstock, Suffield, Enfield, and Somers were given to Massachusetts. In 1749 the Legislature of Connecticut passed a resolution stating that inasmuch as the line had not been approved by the King and the two colonies had no legal right to transfer territory without the confirmation of the Crown, the contract was void, and these towns were again taken under the jurisdiction of Connecticut. Massachusetts appealed to the King, and the claims of Connecticut were fully established.[43]

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[41] Massachusetts Topog. Survey Comm. Rept.: Atlas of the boundaries of the Town of Seekonk, sheet A, 1900.

[42] Massachusetts act of June 3, 1899, ch. 476; Rhode Island act of May 26, 1899, ch. 683. Massachusetts H. Doc. 1230, May 23, 1899, contains reports of the commissioners and of the engineer, also a plat of the line and descriptions of the monuments.

In 1791 Massachusetts and Connecticut appointed commissioners to establish the boundary between them, but the commissioners were unable to agree.

In 1803 commissioners were appointed to complete the line west of the Connecticut River, a compromise having been made concerning the line between the town of Southwick and the towns of Suffield and Granby (the cause of the disagreement of the former commissioners). The agreement made was as follows:[44]

> That the line should begin from a station 8 rods south of the southwest corner of West Springfield, and thence run west to the large ponds, and thence southerly by those ponds to the ancient south line of Westfield, and from thence on said south line to the ancient southwest corner of Westfield; and from thence northerly in the ancient west line of Westfield to the station in said west line made by commissioners in the year 1714, and from thence to the southwest corner of Granville.

The reason for this peculiar deviation from a straight boundary, known as the "Southwick jog," is that in adjusting errors in the boundary line between Connecticut and Massachusetts as previously run by compass a long, narrow strip of land was given to Connecticut, and the Southwick jog ceded to Massachusetts was intended to be an equivalent area.[45]

In 1826 the line between Massachusetts and Connecticut east of the Connecticut River was run by commissioners appointed from each State, and 49 stone monuments were erected, marked "M" on the north side and "C" on the south.[46]

The same commissioners surveyed and marked the line from the northeast corner of Connecticut to the northwest corner of Rhode Island, reporting as follows:

> Beginning at the monument erected at the northeast corner of said State of Connecticut and running in a direct line to the ancient heap of stones on the north side of the turnpike leading from Hertford to Boston, through Thompson and Douglass, where we erected a monument, and thence running in a direct line to the northwest corner of the State of Rhode Island.

The present boundary between Massachusetts and Connecticut was fixed by a joint commission authorized by legislative acts of both States in 1905. The line as surveyed and marked was approved by Massachusetts in 1908,[47] by Connecticut in 1913, and by the United States Congress October 3, 1914.[48] Part of it is thus described:

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[43] Hollister, G. H., History of Connecticut, vol. 2, pp. 463–464, Hartford, 1855.

[44] Massachusetts special laws, vol. 3, p. 234, 1805. For the full report of the commissioners see Connecticut private laws, vol. 2, pp. 1540–1544, 1837.

[45] See Bowen, C. W., The boundary disputes of Connecticut, p. 65, Boston, 1882.

[46] Connecticut private laws, vol. 2, pp. 1544–1550, 1837.

> Beginning at a granite monument at the northwest corner of the State of Rhode Island and marking the corner of Massachusetts, Rhode Island, and Connecticut, in latitude 42° 00′ 29.150″ and longitude 71° 47′ 58.778″; [thence in a general northerly direction] to a granite monument at the northeast corner of the State of Connecticut, in latitude 42° 01′ 24.807″ and longitude 71° 48′ 04.123″.

From this corner the boundary is approximately a straight line bearing 1° or 2° north of west to a point near the Connecticut River.

From a granite monument in latitude 42° 02′ 04.619″, longitude 72° 31′ 55.276″, the line runs as follows:

> South 81° 56′ 34″ west, 11,309 feet to a granite monument about 620 feet south of Allen Street in Longmeadow, in latitude 42° 01′ 48″.933 and longitude 72° 34′ 23″.644; thence south 51° 56′ 28″ west, 3,238 feet to a granite monument 450 feet east of the main road from Thompsonville to Springfield, in latitude 42° 01′ 29″.212 and longitude 72° 34′ 57″.422; thence north 88° 35′ 49″ west, 5,834 feet to a granite monument on the top of the bank, about 175 feet east of the easterly shore of the Connecticut River, in latitude 42° 01′ 30″.616 and longitude 72° 36′ 14″.696; thence in the same direction, 950 feet to the middle of said river; thence northerly along a line midway between the banks thereof, about 2.075 feet; thence north 87° 18′ 55″ west, 1,260 feet to a granite monument standing on the bank about 225 feet west of the westerly shore of the river, in latitude 42° 01′ 51″.983 and longitude 72° 36′ 44″.913; thence in the same direction, 7,661 feet to a granite monument about 875 feet west of North Street, or Suffield Street, the middle road from Suffield to Springfield, in latitude 42° 01′ 55″.516 and longitude 72° 38′ 26″.318; thence north 82° 39′ 40″ west, 8,966 feet to a granite monument on the easterly side of Halladay Avenue, or Front Street, the road from Suffield to Feeding Hills, in latitude 42° 02′ 06″.813 and longitude 72° 40′ 24″.149; thence north 84° 51′ 12″ west, 7,202 feet to a granite monument on the easterly side of West Street, the road from West Suffield to Westfield, in latitude 42° 02′ 13″.185 and longitude 72° 41′ 59″.207; thence south 89° 46′ 25″ west, 4,137 feet to a granite monument at the corner of Agawam and Southwick in Massachusetts and Suffield in Connecticut, in latitude 42° 02′ 13″.019 and longitude 72° 42′ 54″.032; thence south 0° 48′ 01″ east, 132 feet to a granite monument, in latitude 42° 02′ 11″.716 and longitude 72° 42′ 54″.008; thence south 89° 38′ 09″ west, 11,231 feet to a granite monument on the easterly shore of Congamond Lake, in latitude 42° 02′ 10″.984 and longitude 72° 45′ 22″.830; thence in the same direction, 14.5 feet to the shore of the lake as it would be with the surface of the water at the elevation it was in 1803; thence southerly, by the easterly shore of the lake as it would be with the surface of the water at the aforesaid elevation to a point opposite a granite monument near the shore at the southerly end of the lake; thence south 4° 26′ 29″ west, about 25 feet to said monument, in latitude 42° 00′ 27″.957 and longitude 72° 46′ 00″.167; thence in the same direction, 1,632 feet to a granite monument at the southeasterly corner

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[47] Massachusetts acts of 1908, ch. 192.

[48] 38 Stat. L. 727.

of the "Southwick jog," in latitude 42° 00′ 11″ .881 and longitude 72° 46′ 01″.841; thence south 81° 33′ 28″ west, 13,827 feet to a granite monument at the southwesterly corner of the "Southwick jog," in latitude 41° 59′ 51″.787 and longitude 72° 49′ 02″.976; thence north 3° 33′ 56″ east, 14.261 feet to a granite monument known as the "Crank Monument," in latitude 42° 02′ 12″.399 and longitude 72° 48′ 51″.223.

From this corner the line runs on a general westerly course, bearing about 1° north of west, to

a large rock, marked 1803 on its southerly side, in Sage's Ravine, in latitude 42° 03′ 02.214″ and longitude 73° 26′ 00.030″; thence south 88° 31′ 58″ west 14,787 feet to a granite monument at the northwesterly corner of the State of Connecticut and marking the corner of Massachusetts, New York, and Connecticut, in latitude 42° 02′ 58.427″ and longitude 73° 29′ 15.959″.[49]

The boundary between Massachusetts and New York was from an early period a subject of controversy, New York claiming to the west bank of the Connecticut River, under the charters of 1664 and 1674 to the Duke of York, and Massachusetts claiming to the "South Sea," under her old charters. After many fruitless attempts at a settlement, an arrangement was entered into in 1773 fixing the western boundary of Massachusetts where it now meets New York territory. The Revolution soon following, the line was not run. In 1785 Congress appointed three commissioners to run the line, who performed that duty in 1787. The line was as follows:[50]

Beginning at a monument erected in 1731 by commissioners from Connecticut and New York, distant from the Hudson River 20 miles, and running north 15° 12′ 9″ east 50 miles 41 chains and 79 links, to a red or black oak tree marked by said commissioners, which said line was run as the magnetic needle pointed in 1787.

The claims of Massachusetts to western lands within the territory of the State of New York were finally settled December 16, 1786, by a joint commission of the two States. By this agreement Massachusetts surrendered the sovereignty of the whole disputed territory to New York and received in return the right of soil and pre-emption right of Indian purchase west of the meridian passing through the eighty-second milestone of the Pennsylvania line (see fig. 8), except certain reservations upon the Niagara River. The title to a tract known as "The Boston Ten Towns," lying east of this meridian and previously granted to New York by Massachusetts, was confirmed.[51]

On April 19, 1785, Massachusetts executed a deed transferring to the United States all title of the State of Massachusetts to territory west of the present western boundary of New York.

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[49] For the full notes of this boundary see Massachusetts acts of 1908, ch. 192; and Connecticut acts of 1913; see also 38 Stat. L. 727. For a description of each of the 214 marks on this line see Board of Harbor and Land Commissioners Twenty-ninth Ann. Rept.: Massachusetts Pub. Doc. 11 of 1907, pp. 106–117, Boston, 1908.

[50] New York Rev. Stat., 1875, p. 122.

[51] Hough's New York Gazette, 1872, pp. 25, 26.

In 1820 Maine, previously a part of Massachusetts, was admitted into the Union as an independent State.

In 1853 an area of about 1,010 acres (see insert, fig. 8) in the southwest corner of Massachusetts, known as Boston Corners,[52] was ceded to New York, and in 1855 the cession was confirmed by Congress.[53]

The present boundary between Massachusetts and New York was thus described from resurveys by a joint commission in 1899:

> Beginning at bound 1, a granite monument set in ledge on the side of a wooded mountain peak six hundred and nine feet east of Ryan Bush Road, in latitude 42° 02′ 58.427″ north of the Equator, and longitude 73° 29′ 15.959″ west from Greenwich, and marking the northwest corner of Connecticut, a corner of the Commonwealth of Massachusetts, and a corner of the State of New York; thence on an azimuth of 90° 43′ 49″, twenty-six hundred and twenty-four feet to bound 3, a granite monument set in ledge on the steep westerly slope of a wooded mountain, in latitude 42° 02′ 58.756″ and longitude 73° 29′ 50.737″, at the southwest corner of Massachusetts, also in the eastern line of New York, and marking a corner of the towns of Mount Washington, in Massachusetts, and Ancram and Northeast, in New York; thence on an azimuth of 167° 08′ 15″, thirteen thousand six hundred and forty-nine feet to bound 9, a granite monument set in ledge on the westerly wooded slope of Alandar Mountain about a quarter mile west of its summit, in latitude 42° 05′ 10.205″ and longitude 73° 30′ 31.031″, at the corner of Mount Washington, in Massachusetts, and Copake, in New York; thence on an azimuth of 195° 12′ 22″, two hundred forty-nine thousand two hundred and forty-six feet, by the towns of Mount Washington, Egremont, Alford, West Stockbridge, Richmond, Hancock, and Williamstown, in Massachusetts, and Copake, Hillsdale, Austerlitz, Canaan, New Lebanon, Stephentown, Berlin, and Petersburg, in New York, to bound 112, a granite monument set in ledge and earth on an open easterly slope about seventy-five feet west of a private roadway, in latitude 42° 44′ 45.201″ and longitude 73° 15′ 54.904″ at the northwest corner of Massachusetts, also in the east line of New York and in the south line of Vermont, and marking a corner in the boundaries of the towns of Williamstown, in Massachusetts, Petersburg, in New York, and Pownal, in Vermont.
>
> The term "azimuth" as used in this description is the angle which a line makes at its point of beginning with the true meridian, reckoning from the south around by the west.

This location of the line was approved by Massachusetts May 8, 1901, and by New York June 9, 1910.[54]

Massachusetts is one of the very few States that has had her boundary lines adequately marked and by frequent inspection maintains the marks in good condition. In addition to the marking of her exterior lines the State has also had comprehensive surveys made of interior township boundaries. The lines and corners are controlled by an accurate system of triangulation, so that if any number of marks were destroyed the exact positions for new ones to replace them could be readily ascertained from the triangulation data. The results of these surveys are published by the State Harbor and Land Commission in a series of folios, which give plats of the lines, positions of triangulation stations, descriptions of boundary marks, extracts from laws by which the lines were fixed, and some historical matter. This action by the State is highly commendable and could be followed by other States with profit.

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[52] See U. S. Geol. Survey topographic map of Copake quadrangle, N. Y.-Mass.

[53] 10 Stat. L. 602.

[54] Massachusetts acts of 1901, ch. 374; New York acts of 1910, ch. 447.

RHODE ISLAND[55]

The present State of Rhode Island was settled by Roger Williams and other immigrants, who left Massachusetts Bay and established themselves at Providence in 1636.[55]

In 1643 a patent was granted for the Providence Plantations, from which the following are extracts:[56]

> And whereas there is a Tract of Land in the Continent of America aforesaid, called by the Name of Narraganset Bay; bordering Northward and Northeast on the Patent of the Massachusetts, East and Southwest on Plymouth Patent, South on the Ocean, and on the West and Northwest by the Indians called Nahigganneucks, alias Narragansets; the whole Tract extending about twenty-five English Miles unto the Pequot River and Country.
>
> And whereas divers well affected and industrious English Inhabitants, of the Towns of Providence, Portsmouth, and Newport, in the tract aforesaid, * * * have represented their Desire, * * * Do, * * * give, grant, and confirm to the aforesaid Inhabitants of the Towns of Providence, Portsmouth, and Newport a free and absolute Charter of Incorporation, to be known by the Name of the Incorporation of Providence Plantations, in the Narragansett Bay, in New England. * * *

In 1663 Charles II granted a charter to the governor and company of the colony of Rhode Island and Providence Plantations, of which the following is an extract:[57]

> * * * all that parte of our dominiones in New-England, in America, conteyneing the Nahantick and Nanhyganset Bay, and countryes and partes adjacent, bounded on the west, or westerly, to the middle or channel of a river there, commonly called and known by the name of Pawcatuck, alias Pawcawtuck river, and soe along the sayd river, as the greater or middle streame thereof reacheth or lyes vpp into the north countrye, northward, unto the head thereof, and from thence, by a streight lyne drawn due north vntil itt meets with the south lyne of the Massachusetts Collonie; and on the north, or northerly, by the aforesayd south or southerly lyne of the Massachusetts Collony or Plantation, and extending towards the east, or eastwardly, three English miles to the east and northeast of the most eastern and northeastern parts of the aforesayd Narragansett Bay, as the sayd bay lyeth or extendeth itself from the ocean on the south or southwardly, vnto the mouth of the river which runneth towards the towne of

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[55] The legal name for this State is "The State of Rhode Island and Providence Plantations."

[56] Thorpe, F. N., op. cit., vol. 6, p. 3210.

[57] Idem, p. 3220.

> Providence, and from thence along the eastwardly side or banke of the sayd river (higher called by the name of Seacunck river), vp to the ffalls called Patuckett ffalls, being the most westwardly lyne of Plymouth Collony, and soe from the sayd ffalls, in a streight lyne, due north, until itt meete with the aforesayd line of the Massachusetts Collony; and bounded on the south by the ocean; and in particular, the lands belonging to the townes of Providence, Pawtuxet, Warwicke, Misquammacok, alias Pawcatuck, and the rest vpon the maine land in the tract aforesayd, together with Rhode Island, Blocke Island, and all the rest of the islands and banks in the Narragansett Bay and bordering vpon the coast of the tracts aforesaid (Fisher's Island only excepted), * * *

This charter was in force until 1843, when the constitution adopted in 1842 became effective.

For a history of the northern and eastern boundaries see Massachusetts, pages 93–94.

In 1703 substantially the present western boundary was adopted by an agreement made between the commissioners from the two colonies of Rhode Island and Connecticut, namely, "A straight line from the mouth of Ashawoga River to the southwest corner of the Warwick purchase, and thence a straight north line to Massachusetts." This line was actually run by Rhode Island and is still known as the Dexter and Hopkins line, but Connecticut would not accept the line as thus marked. Rhode Island appealed to the King, and the agreement of 1703 was confirmed in 1726. In September, 1728, commissioners from the two colonies met and ran the line.[58]

In 1839 commissioners were appointed by Rhode Island and Connecticut to survey the line and erect monuments. The following described line was established:

> Beginning at a rock near the mouth of Ashawoga River, where it empties into Pawcatuck River, and from said rock a straight course northerly to an ancient stone heap at the southeast corner of the town of Voluntown, and from said rock southerly in the same course with the aforesaid line, until it strikes Pawcatuck River. From the southeast corner of Voluntown a straight line to a stone heap at the southwest corner of West Greenwich; from thence a straight line to the southwest corner of the ancient town of Warwick, and which is now a corner of the towns of Coventry and West Greenwich; from thence a straight line to the northwest corner of the town of Coventry; thence a straight line to the northeast corner of Sterling; thence a straight line to the southwest corner of Burrillville, and thence a straight line to a stone heap upon a hill in the present jurisdictional line between the States of Massachusetts and Rhode Island, and at all of said corners, excepting said Warwick corner, we have erected monuments of stone, marked R. I. and C., and have also placed similar monuments on all the principal roads crossing the line, and at other suitable places.
>
> * * * * * * *
>
> And we have caused the ancient monument which was erected at the Warwick corner in November, 1742, to be reset and a large heap of stones to be made

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[58] For agreements of 1703 and 1728, decisions of English council, etc., see Rhode Island Hist. Soc. Coll., vol. 3, pp. 204–213, 1835.

around it. Said monument is marked with the letter C. on one side, and on the other RHODE ISLAND and the traces of other letters and figures,[59]

The work of these commissioners was ratified in 1846.

CONNECTICUT [60]

In 1630 the Plymouth Council made a grant of Connecticut to Robert, Earl of Warwick, its president.[61] This grant was confirmed by King Charles in 1631, and on March 19 of that year the earl conveyed his title to Lord Say and Seal, Lord Brooke, Sir Richard Saltonstall, and others, associated under the name of The Plymouth Company.[62]

A charter was granted by Charles II to Connecticut in 1662, of which the following is an extract: [63]

> We, * * * do give, grant and confirm unto the said Governor and Company, and their Successors, all that Part of Our Dominions in New England in *America*, bounded on the east by *Narraganset* River, commonly called *Narraganset Bay*, where the said River falleth into the sea; and on the *North* by the Line of the *Massachusetts plantation;* and on the *South* by the Sea; and in Longitude as the Line of the Massachusetts Colony, running from *East* to *West, that is to say*, from the said *Narraganset-Bay* on the *East*, to the *South Sea* on the *West* part, with the *Islands* thereunto adjoining.

Prior to this time the two colonies of Connecticut and New Haven had continued separate, but they were united under this charter, which was accepted by them April 20, 1665.[64] The Duke of York having been granted a charter in 1664, by which the lands west of the Connecticut River were embraced in his jurisdiction, the question of boundary immediately arose. About this time Col. Richard Nichols, George Cartwright, Sir Robert Carr, and Samuel Maverick, had been appointed commissioners by the King and clothed with extraordinary powers to determine all controversies in the colonies. The matter was referred to them, and, after a full hearing, they determined that the southern boundary of Connecticut was the sea (Long Island Sound) and its western boundary the Mamaroneck River and a line drawn north-northwest from the head of salt water in that stream to Massachusetts. The territory south and west of these lines was declared to belong to the

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[59] Rhode Island acts and resolves, January, 1846, pp. 12, 13, 14.

[60] For an excellent historical description of the boundaries of Connecticut see Bowen, C. W., The boundary disputes of Connecticut, Boston, 1882.

[61] For a historical description of this and other royal grants of the Connecticut area and of lands now in Pennsylvania and Ohio formerly claimed by Connecticut, see Western Reserve Univ. Bull., August, 1923, pp. 37–57.

[62] Dwight, Theodore, jr., History of Connecticut, p. 19, New York, 1840.

[63] Thorpe, F. N., op. cit., vol. 1, p. 535. For a history of the claims made by Connecticut to a narrow strip of land called "the gore" along the 42d parallel (the south line of New York) and to the "Western Reserve" see Report of the Regents [of New York] Boundary Commission upon the New York and Pennsylvania boundary, pp. 418 et seq., Albany, 1886.

[64] Thorpe, F. N., op. cit., p. 529.

Duke of York. It was supposed that this west boundary would run about 20 miles east of the Hudson River, but it was discovered later by surveyors from Connecticut that it actually intersected the Hudson near the present site of Tarrytown.

In 1674 the Duke of York received a new charter in substantially the same terms as that of 1664. New controversies concerning jurisdiction led to a new agreement, dated November 28, 1683, between the governors of New York and Connecticut, which fixed the boundary substantially as it now exists between the two States and was sanctioned by the King. This agreement is as follows:[65]

> It is agreed that the bounds meares or dividend between his Roy^{all} High^{ss} Territory in America and the Colony of Connecticut forever hereafter shall begin att a certain Brook or River Called Byram Brooke or River which River is between the Towns of Rye & Greenwich that is to say att the mouth of the said Brooke where it falleth into the Sound at a Point Called Lyon's Point which is the Eastward Point of Byram River, and from the said Point to goe as the said River Runeth, to the place where the Common Road or Wading place over the said River is and from the said Road or Wading place to goe North North west into the Country soe farr as will be Eight English miles from the aforesaid Lyons Point, and that a Line of twelve Miles being measured from the said Lyons Point According to the Line or Generall Course of the Sound Eastward where the said twelve miles Endeth Another line shall be Runn from the Sound Eight miles into the Country North North West and alsoe that a fourth line be Runn that is to say from the North most end of the line first menconed unto the Northmost end of the Eight mile line being the third menconed line which fowrth line with the first menconed Line shall be the bounds where they shall fall to runn. And that from the Eastward End of the fowrth menconed Line (which is to be twelve miles in Length) A Line Paralell to Hudson's River in every place twenty miles distant from Hudson's River shall be the bounds there between the said Territory or Province of New Yorke, and the said Collony of Connecticutt soe farr as Connecticutt Doth Extend Northwards that is to the South line of the Massachusetts Collony.
>
> Only it is Provided that in Case the Line from Byrams Brooke Mouth North North West Eight Miles and the line that is thence to runn twelve miles to the end of the third foremenconed line of Eight Miles Doe Diminish or take away any Land within twenty myles of Hudsons River that then soe much as is in Land Diminished of twenty miles from Hudsons River thereby shall be added out of Connecticutt bounds unto the Line aforemenconed & Paralell to Hudsons River and Twenty miles Distant from it the addition to be made the whole Length of the said Paralell line and in such breadth as will make upp Quantity for Quantity what shall be diminished as aforesaid. * * *

A survey of the southwestern part of the boundary was made in 1684 and ratified by both parties. It was then decided that in accordance with the agreement a tract of land estimated at 61,440 acres should be permanently released to Connecticut by New York, in exchange for which New York should receive an equivalent area in a tract of uniform width between the Sound tract and the south line of Massachusetts, but for various reasons the survey of the equivalent lands was not made at that time.

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[65] Report of the commissioner appointed to ascertain the boundary line between the States of New York and Connecticut, transmitted to the Legislature of New York Apr. 10, 1857, p. 110, Albany, 1857.

This settlement of the boundary dispute was not satisfactory to the settlers in the tract added to New York who for the next 40 years endeavored to have the line moved west. Four sets of commissioners appointed successively for this purpose were unable to come to an agreement. A fifth set, appointed in 1725, entered into articles of agreement settling the manner of the survey, but they ran only the line bounding the tract on Long Island Sound. For some cause action was then suspended until 1731, when the commissioners of 1725 surveyed and set off the oblong or equivalent territory to New York, defining and marking its boundary, which was to remain forever the dividing line between the respective Colonies. The line ran substantially as at present and is as follows:[66]

> Beginning at Lyon's Point, in the mouth of a brook or river called Byram river, where it falls into Long Island sound, and runnning thence up along said river to a rock at the ancient road or wading place in said river, which rock bears north 12° 45′ east, 550 rods from said point; then north 23° 45′ west, 2292 rods; then east-north-east, 13 miles and 64 rods, which lines were established in the year 1725, by Francis Harrison, Cadwallader Colden, and Isaac Hicks, commissioners on the part of the then province of New York, and Jonathan Law, Samuel Eells, Roger Wolcott, John Copp, and Edmund Lewis, commissioners on the part of the then colony of Connecticut, and were run as the magnetic needle then pointed: then along an east-north-east continuation of the last-mentioned course, 1¾ miles, and 21 rods to a monument erected in the year 1731 by Cadwallader Colden, Gilbert Willett, Vincent Matthews, and Jacobus Bruyn, junior, commissioners on the part of said province, and Samuel Eells, Roger Wolcott, and Edmund Lewis, commissioners on the part of said colony; which said monument is at the southeast corner of a tract known and distinguished as the oblong or equivalent lands; then north 24° 30′ west, until intersected by a line run by said last-mentioned commissioners, on a course south 12° 30′ west, from a monument erected by them in the south bounds of Massachusetts, which monument stands in a valley in the Taghkanick mountains, 121 rods eastward from a heap of stones, in said bounds on the top or ridge of the most westerly of said mountains; then north 12° 30′ east, from a monument erected by said last-mentioned commissioners at said place of intersection, and standing on the north side of a hill, southeasterly from the easternmost end of the long pond, along the aforesaid line to the aforesaid monument erected in the south bounds of Massachusetts, being the northeast corner of the oblong; * * *

For more than a century no further controversy arose, but after 1850 questions of jurisdiction were raised, and in 1855 Connecticut made a proposition for a new survey. Several sets of commissioners were appointed;[67] but no agreement being reached, finally, in 1860, pursuant to an act of the Legislature of New York, the line was run by the New York commissioners, Connecticut not being represented.

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[66] New York Stat. 1829, vol. 1, pp. 61–65; Rev. Stat. 1882, vol. 1, pp. 127–128.

[67] See Report of commissioners appointed in 1856 to ascertain the boundary between the States of New York and Connecticut, Albany, 1857, which includes map and historical data.

The first section of the act of the New York Legislature is as follows:

> 1. The commissioners appointed by the governor to ascertain the boundary line between the States of New York and Connecticut are hereby empowered and directed to survey and mark, with suitable monuments, the said line between the two States as fixed by the survey of 1731.[67a]

Twenty years later other commissioners representing the two States agreed to accept the survey of 1860, and their report which was ratified the same year, was as follows:[68]

> We agree that the boundary on the land constituting the western boundary of Connecticut and the eastern boundary of New York shall be and is as the same was defined by monuments erected by commissioners appointed by the State of New York, and completed in the year 1860, the said boundary line extending from Byram Point, formerly called Lyon's Point, on the south, to the line of the State of Massachusetts on the north. And we further agree that the boundary on the sound shall be and is as follows: Beginning at a point in the center of the channel, about 600 feet south of the extreme rocks of Byram Point, marked No. 0, on appended United States coast survey chart; thence running in a true southeast course 3¼ statute miles; thence in a straight line (the arc of a great circle) northeasterly (82.27 miles) to a point 4 statute miles due south of New London light-house; thence northeasterly to a point marked number one, on the annexed United States coast survey chart of Fisher's island sound, which point is on the longitude east three-quarters north, sailing course down on said map, and is about 1,000 feet northerly from the Hammock or North Dumpling lighthouse; thence following said east three-fourths north sailing course as laid down on said map easterly to a point marked number two on said map; thence southeasterly to a point marked No. 3 on said map; so far as said States are coterminous.

This agreement was confirmed by the Congress of the United States February 26, 1881.[69]

The line of 1860 was so poorly marked that the Legislature of New York in 1887 and the Legislature of Connecticut in 1902 ordered a resurvey, which was made in 1909–10. In that survey the line of 1860 was followed as closely as possible. Where old boundary stones of suitable size were found they were reset in concrete bases, and about 100 new ones were added, made of cut granite 12 by 12 inches by 9 or 10 feet, set in concrete bases 4 by 4 feet in section and 5 or 6 feet deep. (See p. 6.) This survey was approved by the State legislatures in 1913 and formally ratified by congressional act of January 10, 1925,[70] in which the description of the boundary is given including distances and bearings of the lines through Long Island Sound.

[67a] See Report of the commissioners to ascertain and settle the boundary line between the States of New York and Connecticut, Feb. 8, 1861, in which will also be found a complete account of this controversy.

[68] New York Rev. Stat., 1882, vol. 1, p. 136.

[69] 21 Stat. L. 351.

For the history and present location of the eastern boundary of Connecticut, see Massachusetts, page 97, and Rhode Island, page 101. For the northern boundary, see Massachusetts, page 95.

Under the charter of 1662 Connecticut claimed a large western territory. Subsequent to the Revolution, however, in 1786, 1792, 1795, and 1800, she relinquished all title to any land west of her present boundary. (See p. 66.)

NEW YORK[71]

The territory included in the present State of New York is part of that claimed by both France and England by right of discovery. It was included in the territory of Acadia, for which a charter was given by Henry IV of France in 1603, and was included also within the limits of the Virginia colony, chartered by James I of England in 1606, which embraced all that part of America between 34° and 45° north latitude. Much of the territory west of the Hudson River was held by the French and Indians and was a source of dispute for many years. The Indian treaty of 1684 gave England nominal control, but the French were not finally dispossessed of their claim until nearly a hundred years later. The Dutch in 1613 established trading posts on the Hudson and claimed jurisdiction over the territory between the Connecticut and Delaware Rivers, which they called New Netherlands. The government was vested in the United New Netherland Co., chartered in 1616, and later in the Dutch West India Co., chartered in 1621.

In 1664 King Charles II of England granted to his brother, the Duke of York, a large territory in America, which included, with other lands, all that tract lying between the west side of the Connecticut River and the east side of the Delaware. The Duke of York had previously purchased, in 1663, the territory on the New England coast which had been awarded to the Earl of Stirling, and in 1664, with an armed fleet, he took possession of New Amsterdam, which was thenceforth called New York. This conquest was confirmed by the treaty of Breda in 1667.

The following is an extract from the grant of 1664 to the Duke of York:[72]

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[70] 43 Stat. L. 731.

[71] The boundaries of New York are described in considerable detail in Report of the Regents of the University on the boundaries of the State of New York: [State] Senate Doc. 108, vol. 1, 350 pp., 1874; vol. 2, 867 pp., 1884. Volume 2 includes an index for both volumes and contains copies from unpublished manuscript relating to the boundaries and a vast amount of historical matter, copies of royal grants, copies from field notes, reports of surveys, etc.

[72] Thorpe, F. N., The Federal and State constitutions, vol. 3, p. 1637.

> We have given James Duke of York all that part of the maine land of New England beginning at a certaine place called or knowne by the name of St. Croix next adjoyning to New Scotland in America and from thence extending along the sea coast unto a certain place called Petuaquine or Pemaquid and so up the River thereof to the furthest head of ye same as it tendeth northwards and extending from thence to the River Kinebequi and so upwards by the shortest course to the River Canada northward and also all that Island or Islands commonly called by the severall name or names of Matowacks or Long Island scituate lying and being towards the west of Cape Codd and ye narrow Higansetts abutting upon the maine land between the two Rivers there called or knowne by the severall names of Conecticutt and Hudsons River together also with the said river called Hudsons River and all the land from the west side of Conecticutt to ye east side of Delaware Bay and also all those severall Islands called, or knowne by the names of Martin's Vineyard and Nantukes otherwise Nantuckett.

The Dutch recaptured New York in July, 1673, and held it until it was restored to the English by the treaty of Westminster, in February, 1674. The Duke of York thereupon, to perfect his title, obtained a new grant in substantially the same terms as that of 1664, of which the following is an extract:[73]

> All that part of the Mayne land of New England, begining att a certaine Place called or knowne by the name of St. Croix next adjoining to New Scotland in America; and from thence extending along the Sea-Coast into a certaine place called Petuaquine or Pemaquid, and soe upp the River thereof to the furthest head of the same as itt tendeth Northwards and extending from the River of Kinebeque and so upwards by the shortest Course to the River Canada Northwards; And alsoe all that Island or Islands commonly called by the severall name or names of Matowacks or Long Island, Scituate lyeing and being towards the West of Cape Codd, and the Narro Higansetts, abutting upon the Mayne land between the two Rivers there called or knowne by the severall names of Conectecutte and Hudsons River, Together alsoe with the said River called Hudsons River, and all the Land from the west side of Conectecutte River to the East side of De la Ware Bay; and also all those severall Islands, called or knowne by the names of Martin-Vinyards and Nantukes, otherwise Nantuckett. * * *

By these grants to the Duke of York and the conquest of the Dutch possessions in America it will be seen that New York originally had a claim to a much larger territory than is now included in its limits. The successive changes in area may be sketched as follows:

In 1664 the Duke of York sold the present State of New Jersey to Lord John Berkeley and Sir George Carteret.

In 1682 the Duke of York sold to William Penn his title to Delaware and the country on the west bank of the Delaware, which had been originally settled by the Swedes but had been conquered by the Dutch and by them surrendered to the Duke of York.

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[73] Report of the Regents of the University on the boundaries of the State of New York, vol. 1, p. 10, 1874.

In 1686 Pemaquid and its dependencies were annexed to the New England government by a royal order of the former Duke of York, who had succeeded to the throne of England.

By the charter of 1691 to Massachusetts Bay all claim to any part of Maine was extinguished, and the islands of Nantucket, Marthas Vineyard, and others adjacent (previously known as Duke's County, N. Y.) were annexed to Massachusetts Bay.

The territory west of the Connecticut River to a line within about 20 miles of Hudson River, now forming portions of Massachusetts and Connecticut, was, by agreements and concessions made at different times, surrendered to those colonies, respectively.

New York by the cession of 1781 to the United States relinquished all its claim to land west of the meridian through the west extremity of Lake Ontario between the north boundary of Pennsylvania and the 45th parallel, and the peace treaty of 1783 cut off the rest of the area claimed by it west of its present limits. (See fig. 8.)

Massachusetts prior to 1786 claimed under its charters title to the soil, but not to the sovereignty, of a large area west of the Hudson River that was also claimed by New York, but by agreement of commissioners representing the two colonies, signed December 16, 1786, Massachusetts released to New York all land east of a meridian commencing on the Pennsylvania line 82 miles west of the Delaware River and extending northward to Lake Ontario, except an area of 3,600 square miles east of that line to be selected by Massachusetts between the rivers "Owega and Chenengo."[74]

The next reduction in area was in 1791, when the consent of New York to the independence of Vermont was made effective by Congress. This left New York with substantially its present boundaries, the distances along which are as follows:[75]

The total length of the State boundary is 1,430 miles—Canadian line, 445 miles; Vermont line, 171 miles; Massachusetts line, 50½ miles; Connecticut line to Long Island Sound, 81 miles; along the ocean around Long Island to the New Jersey shore, 246 miles; New Jersey line, 92½ miles; Pennsylvania line, 344 miles to the beginning of the Canadian line in the middle of Lake Erie. The boundaries are fixed by accepted agreements and are marked by natural watercourses or by monuments.

For the history and settlement of the eastern boundary of New York see Vermont, pages 85–87; Massachusetts, pages 98–99; and Connecticut, pages 102–104.

A bill passed by the Legislature of New York, approved March 29, 1922, provided for the resurvey of a part of the State boundary said to be in dispute, extending from the northwest corner of Connecticut about 12 miles southward.

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[74] Report of the Regents of the University on the boundaries of the State of New York, vol. 1, pp. 219–220, Albany, 1874.

[75] See New York State Engineer and Surveyor Ann. Rept., 1910, p. 30.

The northern boundary was fixed by the treaty of peace in 1783 and by the commission under the sixth article of the treaty of Ghent. (See p. 10.) The 45th parallel part of the boundary is an extension of the Valentine and Collins line of 1772 (p. 86) from the middle of Lake Champlain to the St. Lawrence. From Lake Champlain westward the survey was commenced by Collins and Sauthier in 1773 and completed by Collins the following year.[76] The boundary as thus marked is far from being a straight line. It is in places half a mile north of the 45th parallel, and that parallel is crossed by it in two places west of Rouses Point, but it was finally accepted and confirmed by the treaty of 1842 as part of the north boundary of the United States. (See p. 23 for reference to the St. Lawrence and lake parts of the boundary.)

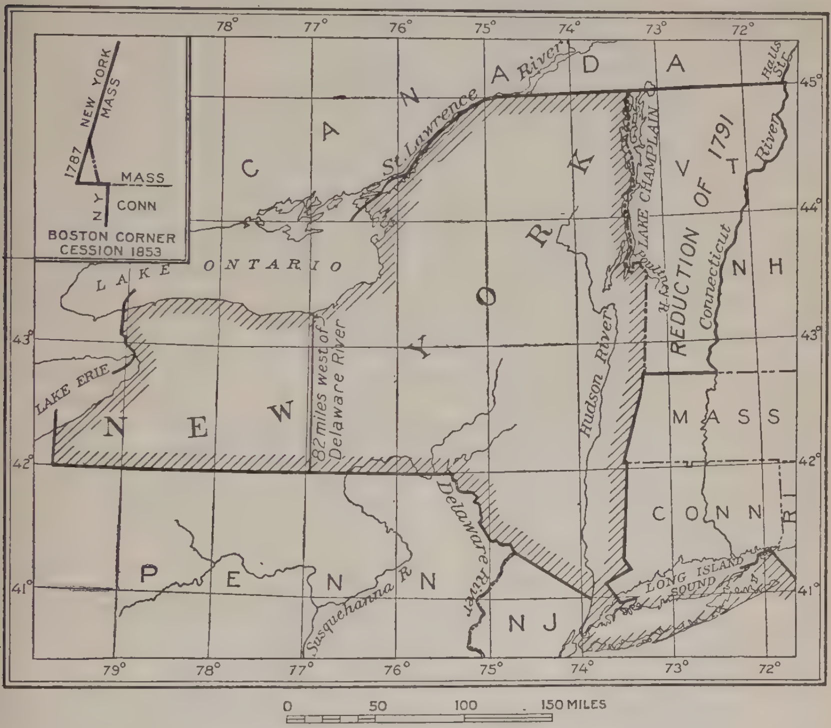
78°
77°
76°
75°
74°
73°
72°
NEW YORK
MASS
1787
MASS
N Y
CONN
BOSTON CORNER CESSION 1853
C A N A D A
St. Lawrence River
Halls Str.
LAKE CHAMPLAIN
REDUCTION OF 1791
V T
Connecticut River
N H
LAKE ONTARIO
LAKE ERIE
N E W Y O R K
82 miles west of Delaware River
Hudson River
M A S S
C O N N
R I
LONG ISLAND SOUND
P E N N
Susquehanna R
Delaware River
N J
45°
44°
43°
42°
41°
79°
0
50
100
150 MILES

FIGURE 8.—Historical diagram of New York

The boundary between New York and New Jersey was plainly stated in the grant by the Duke of York to Berkeley and Carteret. (See p. 115.) In 1719 attempts were made to have the line run and marked, but nothing seems to have been done till 1769, when the King appointed commissioners, who fixed on substantially the present line. In 1772 this line was accepted by both colonies, and in 1773 it was confirmed by the King in council. Commissioners were appointed to survey and mark the line, which was described as follows:[77]

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[76] Geog. Rev., April, 1923, pp. 255–265.

> A direct and straight line from the fork or branch formed by the junction of the stream or waters called the Machackamack with the river Delaware or Fishkill, in the latitude of 41° 21′ 37″, to a rock on the west side of the Hudson River, marked by the said surveyors, in the latitude of 41°—said rock was ordered to be marked with the following words and figures, viz: "Latitude 41° north;" and on the south side thereof, "New Jersey;" and on the north side thereof, "New York;" also to mark every tree that stood on the line with five notches and a blaze on the northwest and southeast sides thereof, and to put up stone monuments, at 1 mile distance from each other, along the said line, and to number such monuments with the number of miles; the same shall be from the before-mentioned marked rock on the west side of Hudson's River, and mark the words "New Jersey" on the south side and the words "New York" on the north side of every of the said monuments.

In 1833 commissioners were appointed by New York and New Jersey for the settlement of the territorial limits and jurisdiction of the two States. The commissioners reached an agreement, which was ratified in 1834 by each State and was confirmed by Congress by an act approved June 28, 1834, providing as follows:[78]

> ARTICLE FIRST. The boundary line between the two states of New York and New Jersey, from a point in the middle of Hudson river, opposite the point on the west shore thereof, in the forty-first degree of north latitude, as heretofore ascertained and marked, to the main sea, shall be the middle of the said river, of the Bay of New York, of the waters between Staten Island and New Jersey, and of Raritan Bay, to the main sea; except as hereinafter otherwise particularly mentioned.
>
> ARTICLE SECOND. The state of New York shall retain its present jurisdiction of and over Bedloe's and Ellis's islands; and shall also retain exclusive jurisdiction of and over the other islands lying in the waters above mentioned and now under the jurisdiction of that state.
>
> ARTICLE THIRD. The state of New York shall have and enjoy exclusive jurisdiction of and over all the waters of the bay of New York; and of and over all the waters of Hudson river lying west of Manhattan Island and to the south of the mouth of Spuytenduyvel creek; and of and over the lands covered by the said waters to the low water mark on the westerly or New Jersey side thereof; subject to the following rights of property and of jurisdiction of the state of New Jersey; that is to say:
>
> 1. The state of New Jersey shall have the exclusive right of property in and to the land under water lying west of the middle of the bay of New York, and west of the middle of that part of the Hudson river which lies between Manhattan island and New Jersey.[79]
>
> 2. The state of New Jersey shall have the exclusive jurisdiction of and over the wharves, docks, and improvements, made and to be made on the shore of the said state; and of and over all vessels aground on said shore, or fastened to any such wharf or dock, except that the said vessels shall be subject to the

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[77] New Jersey Stat. 1821, pp. 29–34.

[78] 4 Stat. L. 708; New York Rev. Stat. 1882, vol. 1.

[79] See 248 U. S. 328.

quarantine or health laws and laws in relation to passengers, of the state of New York, which now exist or which may hereafter be passed.

3. The state of New Jersey shall have the exclusive right of regulating the fisheries on the westerly side of the middle of said waters, *Provided*, That the navigation be not obstructed or hindered.

ARTICLE FOURTH. The state of New York shall have exclusive jurisdiction of and over the waters of the Kill Van Kull between Staten Island and New Jersey to the westernmost end of Shooter's Island in respect to such quarantine laws, and laws relating to passengers as now exist or may hereafter be passed under the authority of that state, and for executing the same; and the said state shall also have exclusive jurisdiction for the like purposes of and over the waters of the sound from the westernmost end of Shooter's Island to Woodbridge creek as to all vessels bound to any port in the said state of New York.

ARTICLE FIFTH. The state of New Jersey shall have and enjoy exclusive jurisdiction of and over all the waters of the sound between Staten Island and New Jersey lying south of Woodbridge creek, and of and over all the waters of Raritan Bay lying westward of a line drawn from the light-house at Prince's bay to the mouth of Mattavan creek; subject to the following rights of property and of jurisdiction of the state of New York; that is to say:

1. The state of New York shall have the exclusive right of property in and to the land under water lying between the middle of the said waters and Staten Island.

2. The state of New York shall have the exclusive jurisdiction of and over the wharves, docks, and improvements made and to be made on the shore of Staten Island, and of and over all vessels aground on said shore or fastened to any such wharf or dock; except that the said vessels shall be subject to the quarantine or health laws and laws in relation to passengers of the state of New Jersey which now exist or which may hereafter be passed.

3. The state of New York shall have the exclusive right of regulating the fisheries between the shore of Staten Island and the middle of said waters: *Provided*, That the navigation of the said waters be not obstructed or hindered.

Bedloes Island and Ellis Island, although on the New Jersey side of the boundary, are under the jurisdiction of the State of New York and are a part of Greater New York City.[80]

In 1876 commissioners were appointed to relocate the land boundary between New York and New Jersey and to replace monuments that had become dilapidated or destroyed or erect new ones. The commissioners found slight discrepancies between some of the original marks and the published descriptions thereof, and the legislature of each State ordered that the original monuments should be considered the true boundary.[81]

In 1874 the New Jersey Geological Survey retraced the land boundary between New Jersey and New York. The report by the State geologist, published at New Brunswick in 1874, contains a plat showing the divergence between the line as run and marked in 1774 by compass and the true arc of a great circle between the two terminals. The greatest divergence is at Greenwood Lake (mile 26 from the Hudson River) and is 2,415 feet. Throughout its length the accepted boundary is south of the straight line and thus gives to New York about 10 square miles of territory that was originally intended to be a part of New Jersey.

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[80] See New York State Laws of 1909, ch. 59, sec. 7; and Greater New York charter, ch. 1, sec. 2, 1897.

[81] See New York S. Doc. 17 of 1875 and New York S. Doc. 20 of 1882.

After this survey New Jersey proposed that New York should consent to a relocation of the boundary on the arc of a circle, but New York failed to concur. Later the two States accepted the line as marked in 1774 as a valid boundary and appointed commissioners, who re-marked the entire line in 1882 with granite monuments placed at each highway and railroad crossing and at the end of each mile, measured from the bank of the Hudson.[82]

In 1887 a joint commission of the two States was appointed to determine and mark the boundary through Raritan Bay. This commission came to an agreement, the terms of which are as follows:

First. From "Great Beds light-house," in Raritan bay, north, twenty degrees sixteen minutes west, true, to a point in the midle of the waters of Arthur Kill, or Staten Island Sound, equidistant between the southwesterly corner of the dwelling house of David C. Butler, at Ward's Point, on Staten Island, in the State of New York, at the southeasterly corner of the brick building on the lands of Cortlandt L. Parker, at the intersection of the westerly line of Water street with the northerly line of Lewis street, in Perth Amboy, in the State of New Jersey.

Second. From "Great Beds light-house," south, sixty-four degrees and twenty-one minutes east, true (S. 64° 21′ E.), in line with the center of Waackaack or Wilson's beacon, in Monmouth County, New Jersey, to a point at the intersection of said line with a line connecting "Morgan No. 2" triangulation point, U. S. Coast and Geodetic Survey, in Middlesex County, New Jersey, with the "Granite and Iron beacon," marked on the accompanying maps as "Romer stone beacon," situated on the "Dry Romer shoal;" and thence on a line bearing north, seventy-seven degrees and nine minutes east, true (N. 77° 9′ E.), connecting "Morgan No. 2" triangulation point, U. S. Coast and Geodetic Survey, in Middlesex County, New Jersey, with said "Romer stone beacon" (the line passing through said beacon and continuing in the same direction), to a point at its intersection with a line drawn between the "Hook beacon," on Sandy Hook, New Jersey, and the triangulation point of the U. S. Geodetic Survey, known as the Oriental Hotel, on Coney Island, New York; then southeasterly, at right angles with the last-mentioned line to the main sea.

Third. The monumental marks by which said boundary line shall be hereafter known and recognized are hereby declared to be as follows:

1. The "Great Beds light-house."
2. A permanent monument marked "State boundary line New York and New Jersey," and to be placed at the intersection of the line drawn from the "Great Beds light-house" to "Waackaack or Wilson's beacon," Monmouth County, New Jersey, and the line drawn from "Morgan No. 2" triangulation point, U. S. Coast and Geodetic Survey, in Middlesex County, New Jersey, to "Romer stone beacon."

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[82] Laws of New York for 1880 and Laws of New Jersey for 1881.

3. Eight buoys or spindles, to be marked like the permanent monument above entioned, and placed at suitable intervening points along the line from the aid permanent monument to the "Romer stone beacon."
4. The "Romer stone beacon."

In 1774 commissions were appointed by New York and Pennylvania to fix the "beginning of the 43d degree" of north latiude (the 42d parallel) on the Mohawk or western branch of the elaware River, which is the northeast corner of Pennsylvania, and o proceed westward and fix the line between Pennsylvania and ew York. These commissioners reported in December of the same ear that they had fixed the northeast corner of Pennsylvania and arked it as follows:[83]

> a small Island marked B in the Draught planted a Stone with the Letters EW-YORK, 1774 Cut on one side and on the Top LAT. 42° VAR. 4° 20′. hence due West on the West side of Delaware River, We collected a Heap of tones at High Water mark and in the said West line 4 Perches distant, lanted another Stone as at C with the Letters PENNSYLVANIA 1774 Cut on he South side and on Top Lat. 42° Var. 4° 20′ and from thence due West 18 P. arked an Ash Tree. But the rigour of the Season prevented us from proeeding further.

Nothing further seems to have been done until 1786–87, when comissioners were appointed to finish the work thus begun, and the ines were run and monuments erected. The line was ratified by ennsylvania in 1789, but no action was taken by the New York egislature until the adoption of the revised statutes in 1829. The ine is described as follows:[84]

> A meridian line drawn through the most westerly bent or inclination of Lake ntario; then south along said meridian line to a monument in the beginning f the forty-third degree of north latitude [on the forty-second parallel], ected in the year 1787, by Abraham Hardenburgh and William W. Morris, ommissioners on the part of this state, and Andrew Ellicott and Andrew orter, commissioners on the part of the state of Pennsylvania, for the purose of marking the termination of the line of jurisdiction between this tate and the said state of Pennsylvania; then east along the line established nd marked by said last mentioned commissioners to the ninetieth milestone the same parallel of latitude, erected in the year 1786, by James Clinton nd Simon DeWitt, commissioners on the part of this State, and Andrew llicott, commissioner on the part of Pennsylvania; which said ninetieth ilestone stands on the western side of the south branch of the Tioga River; en east along the line established and marked by said last-mentioned ommissioners, to a stone erected in the year 1774, on a small island in the elaware river, by Samuel Holland and David Rittenhouse, commissioners on e part of the colonies of New York and Pennsylvania, for the purpose of arking the beginning of the forty-third degree of north latitude; then down long said Delaware river to a point opposite to the fork or branch formed

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[83] Pennsylvania Sec. Internal Affairs Rept. for 1887, p. 495, Harrisburg, 1887.

[84] Pennsylvania Stat. L., vol. 13, pp. 378–379, Harrisburg, Mitchell & Flanders, 1908; ew York Rev. Stat., vol. 1, p. 130, Albany, Banks & Bros., 1882.

by the junction of the stream called Mahackamack with the said Delaware river, in the latitude of 41° 21′ 37″ north; then in a straight line to the termination, on the east bank of the Delaware river of a line run in the year 1774, by William Wickham and Samuel Gale, commissioners on the part of the then colony of New York, and John Stevens and Walter Rutherford, commissioners on the part of the then colony of New Jersey.

The meridian line forming part of the west boundary of New York was surveyed and marked in 1790 by Andrew Ellicott. In order to fix the initial point for this line, Ellicott ran a traverse line from the west end of Lake Ontario along the lake shore to the Niagara River, up and across that river, thence southwest along the south shore of Lake Erie to the computed longitude of the starting point. The notes of this survey have been lost.[85] The total length of the meridian line from a stone post set on the shore of Lake Erie to the Pennsylvania north line was later found to be 98,525 feet. In 1869 a large granite monument was set at a point 440 feet south of the lake-shore mark.[86] (See pl. 3, *C*.) The latitude of this point is 42° 15′ 58.4″, and the longitude 79° 45′ 44.9″.

In 1877 the true position of the 42d parallel was ascertained at four points and in 1879 at nine other points. The distances from the four points to the boundary line were found to be:

1. At Travis Station (Hale's Eddy), very near the east end of that part of the New York and Pennsylvania line supposed to be on the 42d parallel, the old line was found to be 275 feet north of the parallel.
2. At Finn's Station (Great Bend), about 20 miles from the east end, the line is 350 feet south of the parallel.
3. At Burt's Station (Wellsburg), about 70 miles from the east end, the line is 760 feet north of the parallel.
4. At Clark's Station, nearly 225 miles from the east end, the line is 150 feet north of the parallel.[87]

The calculated latitude of the southwest corner of New York is 42° 00′ 01.42″, or very nearly 144 feet north of the true parallel, and its approximate longitude is 79° 45′ 45″.

The New York-Pennsylvania boundary line was resurveyed in whole or in part in 1877–1879; between 1881 and 1885 all missing marks were replaced with granite posts. There are now 519 stone monuments on the 42d parallel line, 224 of which are milestones. There are 18 milestones and 32 other marks on the meridian boundary. The marks between milestones on these lines are mostly at county corners and highway crossings.[88] These boundaries as now located were confirmed by Congressional act of August 19, 1890,[89] which contains a brief history of the lines.

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[85] Report of the Regents of the University on the boundaries of the State of New York, vol. 1, p. 324, 1874.

[86] See Pennsylvania Sec. Internal Affairs Rept. for 1893, p. 133A, for description.

[87] For positions of other points see Report of the Regents' Boundary Commission upon the New York and Pennsylvania boundary, with final report of the surveyor for the Commission: New York S. Doc. 71, 1886, pp. 271–279.

In order that the transportation and terminal facilities in the area including New York City and the adjacent part of New Jersey might be systematically developed, the legislatures of the two States in 1921 created a Port of New York District, within which three commissioners from each State should constitute a Port of New York Authority for the preparation of plans for tunnels, bridges, railways, etc., which, when approved by the States, should be constructed under their supervision. This compact by the States was approved by Congress August 23, 1921,[89a] and the general plans prepared by the commissioners were approved by the State legislature and Congress in 1922.[89b] The Port of New York District is irregular in outline. It includes near its borders parts or all of Paterson, Summit, Plainfield, New Brunswick, and Sandy Hook, N. J., and Rockaway Beach, Jamaica, Rye, and White Plains, N. Y., and covers a total area of about 1,540 square miles.

NEW JERSEY

Although the original grant of 1606 from the English sovereign covered the territory forming the present State of New Jersey, the first grant that directly related to New Jersey was that given in 1664 to Lord John Berkeley and Sir George Carteret, by the Duke of York, two months before the setting out of his expedition to take possession of New York. The following extract from that grant defines the boundaries:[90]

> all that tract of land adjacent to New England, and lying and being to the westward of Long Island and Manhitas Island, and bounded on the east part by the main sea and part by Hudson's river, and hath upon the west Delaware bay or river, and extended southward to the main ocean as far as Cape May, at the mouth of the Delaware bay, and to the northward as far as the northermost branch of the said bay or river of Delaware, which is forty-one degrees and forty minutes of latitude,[91] and crosseth over thence in a straight line to Hudson's river, in forty-one degree of latitude; which said tract of land is hereafter to be called by the name or names of New Caeserea or New Jersey.

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[88] For a description of each mark see Pennsylvania Sec. Internal Affairs Ann. Rept. for 1893, pp. 49A–134A.

[89] 26 Stat. L. 329. For references to Pennsylvania-New York boundary surveys and marks see Cary and Riorden, Laws of Pennsylvania, vol. 3, p. 392, and Reports of the Regents of the University of the State of New York: New York S. Doc. 108 for 1873, Assembly Doc. 91 for 1879, Assembly Doc. 49 for 1870, Assembly Doc. 100 for 1880, S. Doc. 20 for 1882, S. Doc. 71 for 1886, 26 Stat. L. 333, etc. On page 258 of S. Doc. 71, 1886, there is a description of the southwest corner of New York.

[89a] 42 Stat. L. 174.

[89b] 42 Stat. L. 822.

[90] Thorpe, F. N., op. cit., vol. 5, p. 2534.

[91] This point, now called the Tri-State Rock, has since been found to be at latitude 41° 21′ 22.6″ and longitude 74° 41′ 40.7″.

In March, 1673, Lord Berkeley sold his undivided moiety of New Jersey to John Fenwick, by whom, in the following year, it was agai sold. On July 1, 1676, was executed the famous “Quintipartit deed” by which the eastern part was given to Sir George Carteret, t be called east New Jersey, and the western part to William Penn an 11 other proprietors, to be called west New Jersey. The dividing line between the two parts as described in the act of March 27, 1719 was a straight line from the northwest corner of the province, on th Delaware River, to the most southerly point of an “island o sand * * * known by the name of Little Egg Harbour.”

Sir George Carteret, at his death in 1678, left his land to be sold It was sold in 1682 to the 12 proprietors of west New Jersey, wh admitted other partners. Confirmation grants were made to th proprietors of both Provinces by the Duke of York and confirme by the King, but between 1697 and 1701 the proprietors repeatedl made petitions to be allowed to surrender their right of governmen to the Crown. In 1702 the surrender was made and was accepted b Queen Anne, and the two parts were united and made the provinc of New Jersey.[92]

For the history of the northern and eastern boundaries see Ne York, pages 109–113.

The grant from the Duke of York to Berkeley and Carteret define the west boundary of New Jersey to be the Delaware River (se above).

The line between New Jersey and Delaware is thus described:[9

> Low-water mark on the eastern side of the river Delaware, within the twelve mile circle from New Castle; and the middle of the bay below said circle

In 1876 the Legislature of New Jersey authorized the governor t commence a suit in the Supreme Court of the United States to settle the boundary between New Jersey and Delaware.[94] New Jerse claimed jurisdiction and title to the middle of the Delaware Rive and Delaware Bay within the 12-mile circle, while Delaware claime the area to the low-water mark on the east shore. The suit commenced under this act was “dismissed without prejudice” in April 1917.[95]

Meanwhile the questions of jurisdiction and ownership of the trac had been under discussion by commissioners representing the tw States, who in 1905 entered into a compact providing for concurren jurisdiction over the disputed area, but they could not agree on th proper location of the boundary line. This compact was ratified by the legislatures and approved by Congress by act of January 24, 1907.

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[92] See New Jersey State Geologist Final Rept., vol. 1, p. 89, Trenton, 1888. The nam “Province of New Jersey” was later changed to “colony of New Jersey,” and by act o Sept. 20, 1777, to “State of New Jersey.”

[93] Revised Statutes of Delaware, ch. 1, sec. 2, Wilmington, 1874.

[94] Laws of the State of New Jersey, p. 57, Trenton, 1821.

[95] 205 U. S. 550.

Suit was again entered in the Supreme Court at its October term, 1929, in an attempt to obtain a final settlement of this long-standing controversy. New Jersey's bill of complaint and Delaware's answer contain considerable historical matter relating to the two States. The adverse claims to the area in question were reviewed at great length in Senate Executive Document 21, Thirtieth Congress, first session, published in 1848. Although the total area involved is only about 22 square miles it includes valuable oyster beds and is, therefore, of importance to New Jersey.

Commissioners were appointed by New Jersey and Pennsylvania to settle the jurisdiction over the Delaware River and the islands within it, and their report,[96] ratified in 1783, is in part as follows:

> *First.* It is declared that the river Delaware from the station point or northwest corner of New Jersey, northerly[97] to the place upon the said river where the circular boundary of the State of Delaware toucheth upon the same, in the whole length and breadth thereof, is and shall continue to be and remain a common highway, equally free and open for the use, benefit, and advantage of the said contracting parties, etc.
>
> *Secondly.* That each State shall enjoy and exercise a concurrent jurisdiction, within and upon the water, and not upon the dry land between the shores of said river.

The rule for apportioning the islands was that they should be assigned to the State

> to which such insulated dry land doth lie nearest, at the time of making and executing this agreement; and that all other islands within said river between the falls of Trenton and the State of Delaware, which are not hereinafter particularly enumerated, shall be hereafter deemed and considered as parts and parcels of the State, to which such island doth lie nearest at the date hereof; * * * islands hereafter formed * * * shall be classed and annexed * * * according to the same principal.

The islands between the falls of Trenton and the Delaware line were divided as follows: Biles Island near Trenton; Windmill Island, opposite Philadelphia; League Island, Mud or Fort Island, Hog Island, and Little Tinicum Island were assigned to Pennsylvania. To New Jersey were given Biddles or Newbolds, Burlington, Pettys, Red Bank, Harmanus, Helms, Chester, and Shiverses Islands.[96]

In 1786 other commissioners were appointed by New Jersey and Pennsylvania for more accurately determining and describing the islands in the Delaware from the northwest corner of New Jersey down to the falls of Trenton. Their report was ratified and confirmed by Pennsylvania and New Jersey in 1786. The New Jersey act of March 16, 1786,[99] mentions 75 of the islands by name.[1]

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[96] Revision of the Statutes of New Jersey, pp. 1181–1182, Trenton, 1877.

[97] This is a mistake. The line runs south.

PENNSYLVANIA[2]

The Swedish West India Co., chartered by the King of Sweden in 1625, established the first permanent settlement on the west bank of the Delaware, occupying a part of the territory now in Pennsylvania and Delaware, although the Dutch had previously established trading posts there, which had been destroyed by the Indians. The Swedes acquired, by successive purchases from the Indian chiefs, all the land extending from Cape Henlopen to the great falls of the Delaware and called it New Sweden. In 1655 this territory was surrendered to the Dutch.[3]

By the conquest of the New Netherlands, in 1664, the Duke of York seems to have claimed successfully the settlements on the west bank of the Delaware as part of his dominions.

In 1681 Charles II of England granted to William Penn the Province of Pennsylvania. The following extract from the charter defines the boundaries:[4]

> all that Tract or Parte of Land in *America*, with all the Islands therein conteyned, as the same is bounded on the East by *Delaware* River, from twelve miles distance Northwards of *New Castle* Towne unto the three and fortieth degree of Northerne Latitude, if the said River doeth extende so farre Northwards; But if the said River shall not extend soe farre Northward, then by the said River soe farr as it doth extend; and from the head of the said River the Easterne Bounds are to bee determined by a Meridian Line, to bee drawne from the head of the said River, unto the said three and fortieth Degree. The said Lands to extend westwards five degrees in longitude, to bee computed from the said Easterne Bounds; and the said Lands to bee bounded on the North by the beginning of the three and fortieth degree of Northern Latitude, and on the South by a Circle drawne at twelve miles distance from *New Castle* Northward and Westward unto the beginning of the fortieth degree of Northern Latitude, and thence by a streight Line Westward to the Limitt of Longitude above mentioned.

The following explanation regarding the use of the word "begining" in connection with degrees of latitude in this grant is given by Donaldson:[5]

> It should be observed that the geographers of that day considered degrees of latitude as zones taking designation from their northern parallels; hence the

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[99] Laws of New Jersey, ed. of 1821, pp. 78–79.

[1] There is a brief description of the boundaries in New Jersey State Geologist Final Rept., vol. 4, appendix, Trenton, 1898, and a longer description in vol. 1, pp. 39–90, Trenton, 1888.

[2] The full legal title for Pennsylvania is "the Commonwealth of Pennsylvania."

[3] Hazard, Samuel, Annals of Pennsylvania, p. 185, Philadelphia, 1850.

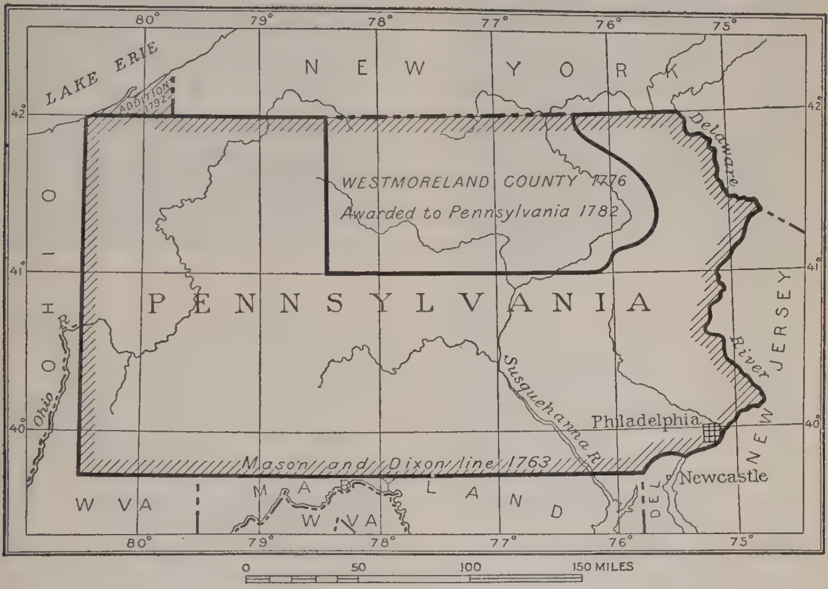
[4] Thorpe, F. N., op. cit., vol. 5, p. 3036.

[5] Donaldson, Thomas, The public domain, its history with statistics, p. 46, Washington, 1884.

north boundary of Pennsylvania, designated as the beginning of the 43d degree, is really the 42d parallel. The south boundary, being the beginning of the 40th degree, was really the 39th parallel, a construction for which Penn earnestly contended in his dispute with Lord Baltimore in relation to the boundary between Pennsylvania and Maryland.

Cushing[6] says: "The idea of a parallel of latitude seems to be a band about the earth parallel to the Equator and 1° wide, with the 'beginning' nearest the Equator."

The grant to William Penn included a large tract of land in the northeastern part of the present State of Pennsylvania, generally referred to as the Wyoming Valley, which was claimed by Connecticut under its charter of 1662. (See fig. 9.) The Indian title to this land was transferred to settlers from Connecticut by deed dated July 11, 1754, wherein the area was thus described:[7]



80°
79°
78°
77°
76°
75°
42°
41°
40°
LAKE ERIE
ADDITION 1792
NEW YORK
WESTMORELAND COUNTY 1776
Awarded to Pennsylvania 1782
OHIO
Ohio R.
PENNSYLVANIA
Delaware River
NEW JERSEY
Susquehanna R.
Philadelphia
Newcastle
Mason and Dixon line 1763
W VA
MARYLAND
W VA
DEL
0
50
100
150 MILES

FIGURE 9.—Historical diagram of Pennsylvania

> Beginning from the one and fortieth degree of north latitude, at ten miles distance east of Susquehanna River, and from thence, with a northerly line ten miles east of the river, to the forty-second, or beginning of the forty-third degree of north latitude, and to extend west two degrees of longitude, one hundred and twenty miles, and from thence south to the beginning of the forty-second degree, and from thence east to the aforementioned bounds
> * * *

This area was organized by Connecticut in 1776 as the county of Westmoreland. The conflicting claims of Connecticut and Pennsylvania to this land were for many years a cause of dispute, and several battles were fought for its possession, but a court of arbitration appointed by the Continental Congress awarded it to Pennsylvania in 1782.

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[6] Cushing, S. W., Assoc. Am. Geographers Annals, vol. 10, p. 33, 1920.

[7] Miner, W. P., History of Wyoming, p. 69, Philadelphia, 1845. See also Stone, W. L., Poetry and history of Wyoming, 2d ed., appendix, New York, 1844.

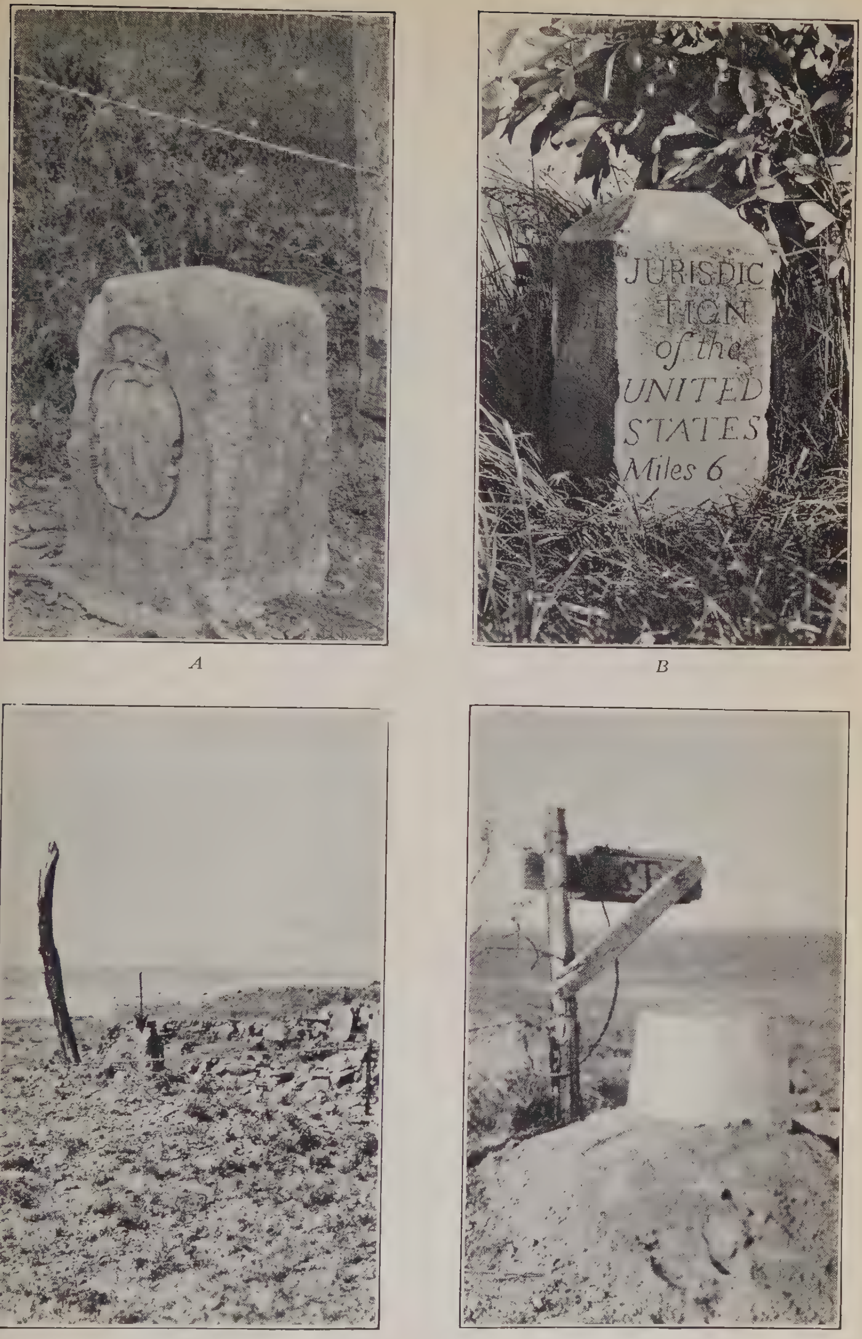
For a history of the northern and eastern boundaries of Pennsylvania see New York, pages 113–114, and New Jersey, page 117.

That part of the southern boundary of Pennsylvania which separates Pennsylvania from Delaware, as defined by the charter of 1681, is an arc of a circle of 12 miles radius, having New Castle, Del., as its center. This line was surveyed and marked in 1701 under a warrant from William Penn. (See p. 125.)

According to the original grant of 1681 the boundary between Pennsylvania and Maryland was to be the "beginning of the 40th degree of northern latitude," or what we would now call the 39th parallel of latitude. (See p. 119.) This boundary was for many years in dispute, Lord Baltimore claiming the country along Delaware Bay and River to the mouth of the Schuylkill, which was also claimed by the Duke of York under his grant of 1664. William Penn, in 1682, obtained from the Duke of York a release of his claim, but not until 1760 was an agreement reached with Maryland. Commissioners were appointed in 1732 and again in 1739 to run the line, but they failed to agree, and chancery suits were the result. Finally a decision of Lord Chancellor Hardwick in 1750 was taken as a basis for adjudication, and an agreement was signed July 4, 1760, by which the line between Pennsylvania on the one part and Delaware and Maryland on the other was to be determined as follows:

A due east-west line was to be run across the peninsula from Cape Henlopen to Chesapeake Bay. From the exact middle of this line a line was to be drawn north which would be tangent to the western arc of a circle having a radius of 12 English statute miles measured horizontally from the center of the town of New Castle. From the tangent point a line was to be drawn due north until it intersected a parallel of latitude 15 miles due south of the southernmost part of the city of Philadelphia. This point of intersection would be the northeast corner of Maryland, and from it the line was to be run west on a parallel as far as it formed the boundary between the two Provinces.

In 1760 commissioners and surveyors were appointed, who spent two or three years in measuring the base line and the tangent line between Maryland and Delaware. The proprietors became wearied with the delay and sent from England two famous mathematicians, Charles Mason and Jeremiah Dixon, who verified the work of their predecessors and ran the line between Pennsylvania and Maryland, ever since called the "Mason and Dixon line" and probably the most widely known boundary in the United States. (See fig. 9.) Mason


JURISDIC
TION
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UNITED
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A
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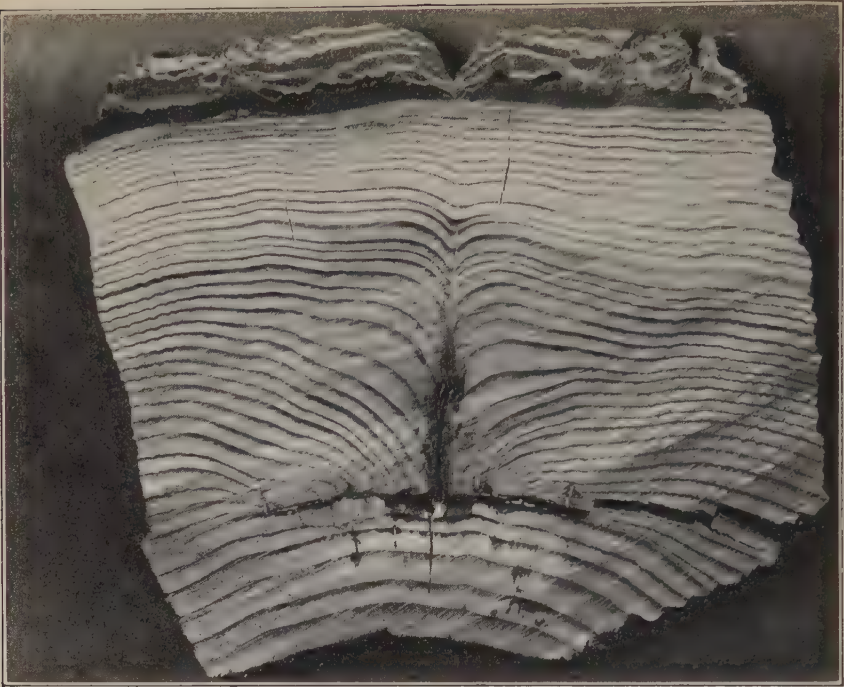
C
D

TYPICAL BOUNDARY MARKS, OLD AND NEW

A, Monument No. 20 on the Mason and Dixon line; *B*, boundary stone between the District of Columbia and Maryland; *C*, a Texas-New Mexico boundary stone; *D*, mark at the northwest corner of Texas.



A. SECTION OF A TREE THAT HAD BEEN USED AS A BOUNDARY MARK

Tree blazed October 20, 1873; section cut July 20, 1909.

B. STATE LINE BUTTE, ON UTAH-ARIZONA LINE and Dixon determined the latitude of this line, which they located 15 miles south of Philadelphia, to be 39° 43′ 17.6″. That they were skilled and did their work carefully is shown by the fact that by the resurvey, made 130 years later with modern instruments and methods, the position found for the line at the northeast corner of Maryland differed only 2.3″ (180 feet) from that determined by them. The later position is 39° 43′ 19.91″. (See p. 126.)

Mason and Dixon began work on this line in 1763 but were stopped by Indians in 1767, after having run the line about 244 miles west of the Delaware (230 miles 18 chains 21 links from the northeast corner of Maryland) and thus not quite finishing the work as planned, although it has since been ascertained that they had run about 30 miles beyond the northwest corner of Maryland.

The original stones for 5-mile marks on this line were carved in England from oölitic limestone; Lord Baltimore's coat of arms was shown on the Maryland side and the Penn arms on the Pennsylvania side. (See pl. 9, *A*.) Intermediate milestones were smaller and were marked "M" and "P" only, on opposite sides.

Because of the removal of the stone at the northeast corner of Maryland and for other reasons, it was deemed desirable to resurvey and re-mark the State boundaries in that locality; consequently Maryland (in 1846), Delaware (in 1847), and Pennsylvania (in 1849) authorized the appointment of commissioners to undertake the task. An Army officer was delegated by them to make the surveys, which were completed in 1850. In the resurvey of the arc boundary and of the adjacent lines the surveyor in charge unfortunately disregarded "the well-known rule that an actual line upon the ground is to be preferred to the written description of the same line in a deed." He changed the position of the arc boundary as marked in 1701 and assigned to Pennsylvania the triangular strip 3½ miles in length (about 840 acres in area) west of the arc boundary, east of Maryland and south of the Mason and Dixon line, which had previously been assumed to belong to Delaware. This survey was approved by the commissioners from the three States, but no formal action regarding it appears to have been taken by the State legislatures.[8]

In 1889 and 1900 the Legislatures of Pennsylvania and Maryland authorized the appointment of a joint commission to "ascertain and re-mark" the boundary between the two States. The field work for this survey was commenced in 1900 and completed in 1903. No changes in the line as run by Mason and Dixon were made; straight lines were run between original monuments, and many new stones were set on the lines thus established. (See pl. 3, *D*.) The report of the commission, dated January 25, 1907, was published in 1908 by authority of the Legislature of Maryland and in 1909 by Pennsylvania. These volumes contain a description of each of the 225 boundary monuments, including many of the original stones that were repaired and reset; also a bibliography of manuscripts and documents relating to the line, with more than 2,000 entries.

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[8] For report of the surveyor see Delaware Senate Jour. for 1851, pp. 56–109. A copy of the report and a map are filed in the Maryland Land Office at Annapolis.

Positions for a dozen or more points on the Mason and Dixon line have been determined by the United States Geological Survey, some of which are as follows:

Latitude	Longitude
39° 43′ 12.9″	77° 29′ 05.6″
39° 43′ 13.0″	76° 59′ 42.3″
39° 43′ 13.5″	76° 57′ 26.9″
39° 43′ 13.8″	76° 55′ 11.4″
39° 43′ 14.2″	76° 52′ 55.7″
39° 43′ 17.5″	76° 41′ 54.3″

In 1889 the Legislatures of Delaware and Pennsylvania authorized the re-marking of the boundary between the two States. The commissioners agreed that the northern boundary of Delaware should run due east from the northeast corner of Maryland to a point 12 miles from the New Castle courthouse and thence follow a curved line passing through as many boundary marks of the 12-mile circle of 1701 as could be identified. The resurvey was made,[9] and 46 marks were set on the arc boundary in 1892–93. The triangular tract assigned to Pennsylvania by the commissioners of 1849 thus reverted to Delaware. The report of the commission and the line as marked by it were "accepted, approved, and confirmed" by the Legislature of Pennsylvania by act of June 22, 1897,[10] but were not formally accepted by the Legislature of Delaware until March 28, 1921. The assent of Congress to the action of the States was given on June 30, 1921.[11] The land part of the Pennsylvania-Delaware line as determined by this survey is 22.87 miles in length.

Commissioners from Virginia and Pennsylvania agreed in 1779 that the boundary between those States should be fixed as follows:[12]

> That the line commonly called *Mason's* and *Dixon's* line be extended due west five degrees of longitude to be computed from the river *Delaware*, for the southern boundary of *Pennsylvania;* and that a meridian drawn from the western extremity thereof to the northern limits of the said states, respectively, be the western boundary of *Pennsylvania* forever.

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[9] For a report of this survey and a historical sketch of the Mason and Dixon line see U. S. Coast and Geodetic Survey Rept. for 1893, pt. 2, pp. 177–222.

[10] Pennsylvania laws for 1897, p. 183.

[11] 42 Stat. L. 104.

[12] Pennsylvania Sec. Internal Affairs Rept. for 1887, p. 293. There is a separate volume of boundary maps accompanying this report. Hening, W. W., Virginia Stat. L., vol. 10, pp. 519–537, 1822.

In order to locate the boundaries as thus described observations of the eclipses of Jupiter's satellites were made in 1784 at Wilmington and at a point estimated to be 5° of longitude west of the Delaware River. While this work was being done the Mason and Dixon line was extended westward by commissioners from Virginia (one of whom was Andrew Ellicott) and from Pennsylvania, and a point was marked for the southwest corner of Pennsylvania, which the astronomic computations showed should be a little more than 1½ miles east of the assumed position, where the observatory had been placed. From the southwest corner of Pennsylvania the meridian boundary was run to the north side of the Ohio River. Between the Ohio and Lake Erie the line was surveyed and marked in 1785 by another commission.

The southern part of the west boundary was again surveyed and marked in 1883 by commissioners representing the two States. The survey was commenced at the Ohio, and the line was run south to the southwest corner of Pennsylvania, a measured distance of a little more than 63½ miles. Twenty-three of the old monuments were found, and 48 new ones were established. Astronomic positions of several marks on this boundary were determined in 1883 in connection with the resurveys. Two of these positions are as follows: Southwest corner of Pennsylvania, latitude 39° 43′ 18.2″, longitude 80° 31′ 08.2″; near Smiths Ferry on the Ohio River, latitude 40° 38′ 27.2″, longitude 81° 31′ 07.5″.

The Ohio-Pennsylvania boundary was resurveyed and re-marked between 1878 and 1882, commencing at a granite monument 6 feet high and 3 feet square at the base, which was erected by the commissioners at a point 2,400 feet south of the edge of Lake Erie. The position of this monument is latitude 41° 58′ 15.31″, longitude 80° 31′ 10.40″ (standard datum). From this point the line was run south to the Ohio River, a distance of 92 miles.[13]

The monument established in 1785 on the north bank of the Ohio in the west boundary of Pennsylvania is of considerable historical importance, for it marks the point from which the first surveys for dividing public land in the United States into ranges and townships were commenced.[14] This general system of surveys has been extended over all the public-land States and has even been adopted by some foreign countries.

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[13] For other details concerning the survey of the west boundary of Pennsylvania see Pennsylvania Sec. Internal Affairs Rept. for 1883, which contains a description of each mark and a plat of the line; see also report for 1887. A historical sketch of the original surveys of the west boundary of Pennsylvania of 1785 and 1786, the report of the resurvey of the Ohio part of this line in 1878 to 1882, descriptions of the boundary stones, and plats of the line were published by the State of Ohio in 1883 (Report of the joint commission appointed by the States of Pennsylvania and Ohio to ascertain and re-mark the boundary line between said States as it was originally established, Columbus, 1883).

[14] See plat of the seven ranges of townships, Ohio Surveys, 1785–1787; U. S. General Land Office file No. 57, Ohio; Peters, W. E., Ohio lands and their subdivisions, pp. 33 and 67, Athens, Ohio, 1918; and Sherman, C. E., Original Ohio land subdivisions, ch. 14, Columbus, 1925.

By the formation of the State of Ohio from lands ceded to the United States by Virginia in 1784 and by Connecticut in 1800 and the separation of West Virginia from Virginia in 1862 the above-mentioned meridian line became the boundary between Pennsylvania on the east and Ohio and West Virginia on the west.

The cession of 1781 by New York to the United States included a triangle of land of about 324 square miles in area bounded by New York, Pennsylvania, and Lake Erie. In order to give Pennsylvania a larger outlet to the lake, this tract, known as the "Erie triangle," was sold by the General Government to that State for $151,640.25,[15] and the deed, dated March 3, 1792, was signed by George Washington.

The east line of the Erie triangle, being part of the west boundary of New York, was first surveyed and marked in 1790. (See p. 114.) In 1869 a new granite monument was placed on this boundary near the lake. (See p. 114.) In 1885 this monument was repaired, and the boundary was rerun to the south line of New York, a distance of a little more than 18 miles. In all, there were then 51 marks on the line.[16]

DELAWARE

The area now forming the State of Delaware was originally settled by the Swedes. In 1655 it was surrendered to the Dutch, who in turn, in 1664, surrendered it to the English; it was then taken possession of by the Duke of York.

William Penn, who had received in 1681 a grant of the Province of Pennsylvania, bought or leased from the Duke of York the territory included in the present State of Delaware, which was conveyed to him by two deeds of "feoffment" dated August 24, 1682. One conveyed a tract of land within a 12-mile circle about New Castle; the other was for "all that tract of land upon Delaware River and Bay beginning 12 miles south from the town of New Castle and extending south to the Horekills, otherwise called 'Lopen.'" Both leases were to be for a period of 10,000 years, but they conveyed land to which the Duke of York then had a very uncertain title. A better title was obtained by royal grant soon afterward and immediately transferred to William Penn.[17] Lord

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[15] This is at the rate of 75 cents an acre for an estimated area of 202,187 acres (315.92 square miles). The area scaled from the most recent maps (including Presque Isle, 3 square miles) is 324 square miles.

[16] See Pennsylvania Sec. Internal Affairs Rept. for 1887, pp. 590, 592, Harrisburg, 1887.

[17] See Assembly of Pennsylvania Report on the resurvey of the Mason and Dixon line, p. 150, 1909, and a similar report by Maryland, Maryland Geol. Survey Special Pub., vol. 7, Baltimore, 1908.

Baltimore vigorously opposed William Penn's claim, and the matter was settled in 1685 by a royal order to divide the territory equally between the two claimants. For a description of the line as marked see pages 120, 122.[18]

In 1701 William Penn granted a charter under which the Province of Pennsylvania and the territories (as Delaware was then called) were authorized to act as separate governments, though both were still under the proprietary government of William Penn.

Acting on the advice of the Continental Congress, the people of Delaware called a convention, which met at New Castle in August, 1776, and on September 10 adopted a constitution for the three counties that had previously been known as "the Government of the counties of New Castle, Kent, and Sussex, upon Delaware," and declared that thereafter the Territory should be called "Delaware State." The boundaries then were substantially as at present.[19]

For a history of the boundary between Delaware and Pennsylvania, see Pennsylvania, pages 121–122, and for that between Delaware and New Jersey, see New Jersey, pages 116–117.

From 1732 to 1769 there was a controversy between the proprietors of Pennsylvania and Maryland in regard to boundaries. The boundaries of Delaware on the south and west were determined as follows:

Beginning at Cape Henlopen and running due west 34 miles 309 perches; thence in a straight line 81 miles 78 chains and 30 links up the peninsula until it touches and makes a tangent to the western periphery of a circle drawn at the horizontal distance of 12 English statute miles from the center of the town of New Castle.

From this tangent point a line was run due north till it cut a parallel of latitude 15 miles due south of the most southern part of the city of Philadelphia. This point of intersection is the northeast corner of Maryland. As the tangent line bears a little west of north, the due north line from the tangent point cuts off an arc of the 12-mile circle. The narrow segment thus formed is a part of Delaware and has an area of less than 20 acres. The boundary line follows the arc of the circle from the tangent point around to the point where the due north line intersects the 12-mile circle, then follows this due north line to the northeast corner of Maryland. The length of this due north line, as given by Mason and Dixon,[20] is 5 miles 1 chain and 50 links.

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[18] See also Dallas, A. J., Laws of the Commonwealth of Pennsylvania, 1797, vol. 1, appendix, p. 24.

[19] Thorpe, F. N., op. cit., vol. 1, pp. 561, 562.

[20] See Delaware S. Jour., 1851, p. 56; Pennsylvania Sec. Internal Affairs Rept. for 1887, p. 349. See U. S. Coast and Geodetic Survey Rept. for 1893, pp. 192–193, for more recent measurements.

The following geographic positions on the Delaware boundary [21] were determined from the survey of 1892:

The "tangent point," the southern of the two points where the 12-mile circle intersects the Maryland east boundary, latitude 39° 38′ 56.95″, longitude 75° 47′ 20.04″.

The northeast corner of Maryland, a point on the Mason and Dixon line, latitude 39° 43′ 19.91″, longitude 75° 47′ 20.03″. The southeast corner of Pennsylvania, where the Mason and Dixon line intersects the 12-mile circle, latitude 39° 43′ 19.91″, longitude 75° 46′ 26.69″. These two corners are 0.79 mile apart.

The terminal monument on the Delaware River on the Pennsylvania-Delaware line, latitude 39° 48′ 27.92″, longitude 75° 25′ 31.53″.

By the survey of 1849 the distance between the tangent point and the north end of the curve on the Maryland boundary is 7,743.7 feet, which would make the latitude of the latter point 39° 40′ 13.47″. The stone set in 1849 at this point was thus described: [22]

> At the point of junction of the three States, a triangular prismatic post of cut granite, 18 inches wide on each side, and 7 feet long, was inserted 4½ feet of its length into the ground. It occupies the exact spot on which the old unmarked stone was found. It is marked with the letters M. P. and D., on the sides facing, respectively, towards the States of Maryland, Pennsylvania, and Delaware. On the north side, below the letter P., are the names of the commissioners, in deep cut letters, namely: H. G. S. Key, of Md., J. P. Eyre, of Pa., G. R. Riddle, of Del., Commissioners, with the date 1849.

This post is still in place, but now it is a mark on the boundary between Delaware and Maryland only, not a tri-State monument.

There was some confusion regarding the location of Cape Henlopen. The place chosen as the starting point for the south boundary line of Delaware is not the same as the present cape of that name. Lord Chancellor Hardwick said regarding its position

> that Cape Henlopen ought to be deemed * * * at the place where * * * laid down on the map or plan annexed to the said articles.

William Penn directed that Cape Henlopen be called Cape James or Jomus.[23] The present Cape Henlopen was then called Cape Cornelis.[24]

The foregoing statements explain the discrepancy between the base line across the peninsula and the position of Cape Henlopen on modern maps.

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[21] For geographic positions of other points on this line see Pennsylvania Sec. Internal Affairs Ann. Rept. for 1893, pp. 151A, 152A, and U. S. Coast and Geodetic Survey Rept. for 1893, pp. 216–222.

[22] Delaware S. Jour., January, 1851, p. 102.

[23] Hazard, Samuel, op. cit., p. 606.

[24] Idem, p. 5.

MARYLAND

The territory embraced in the present State of Maryland was included in the previous charters of Virginia, but nevertheless, in 1632, Lord Baltimore received a royal charter of the Province of Maryland, whose boundaries are defined in the following extract, translated from the original charter, which was in Latin:[25]

> all that part of the Peninsula, or Chersonese, lying in the Parts of America, between the Ocean on the East and the Bay of Chesapeake on the West; divided from the Residue thereof by a right line drawn from the Promontory, or Headland called Watkins Point, situate upon the Bay aforesaid, near the River Wigloo on the West, unto the main Ocean on the East; and between that Boundary on the South, unto that part of the Bay of Delaware on the North, which lieth under the fortieth degree of north latitude from the Equinoctial, where New England is terminated; And all the Tract of Land within the Metes underwritten (that is to say), passing from the said Bay, called Delaware Bay, in a right line, by the Degree aforesaid, unto the true meridian of the first fountain of the River Pattowmack; thence verging towards the South unto the farther Bank of the said River, and following the same on the West and South unto a certain Place called Cinquack, situate near the mouth of said River, where it disembogues into the aforesaid Bay of Chesapeake, and thence by the shortest Line unto the aforesaid Promontory or Place, called Watkin's Point, so that the whole tract of land divided, by the Line aforesaid, between the main Ocean and Watkin's Point unto the promontory called Cape Charles, * * * may entirely remain forever excepted to Us.

By comparing the limits laid down in this charter with the several charters of Virginia and the charter and deeds to William Penn it will be seen that there was a conflict of boundaries on both sides of the Maryland grant. The history of the long controversy with Pennsylvania has already been given. (See Pennsylvania, pp. 120–121, and Delaware, p. 125.) Virginia claimed the territory under her charters and for a time seemed disposed to assert her claim, though in 1638 a proclamation by the governor and council of Virginia recognized the Province of Maryland and forbade trade with the Indians within the limits of Maryland without the consent of Lord Baltimore previously obtained.[26] Virginia's claim was finally given up by a treaty or agreement made in 1658, and her relinquishment was reaffirmed in the constitution of 1776.[27]

In 1663 the Virginia Assembly ordered a survey of the line between Virginia and Maryland on the peninsula and declared it to be "from Watkins Point east across the peninsula." They defined Watkins Point "to be the north side of Wicomicoe River on the eastern shore and neere unto and on the south side of the straight limbe opposite to Patuxent River."[28]

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[25] Thorpe, F. N., op. cit., vol. 3, p. 1678.

[26] Bozman, J. L., History of Maryland from 1633 to 1660, vol. 2, p. 586, Baltimore, 1837.

[27] Thorpe, F. N., op. cit., vol. 7, p. 3818.

[28] Hening, W. W., Virginia Stat. L. from 1619 to 1792, vol. 2, p. 184.

In 1668 commissioners were appointed by Maryland and Virginia to fix the boundary across the peninsula. Their report, dated June 25, 1668,[29] is as follows:

> After a full and perfect view taken of the point of land made by the north side of Pocomoke Bay and south side of Annamessexs Bay have and do conclude the same to be Watkins Point, from which said point so called, we have run an east line, agreeable with the extreamest part of the westermost angle of the said Watkins Point, over Pocomoke River to the land near Robert Holston's, and there have marked certain trees which are so continued by an east line running over Swansecutes Creeke into the marsh of the seaside with apparent marks and boundaries.

Virginia, by the adoption of her constitution of 1776, relinquished all claim to territory covered by the charter of Maryland, thereby fixing Maryland's western boundary as follows:

> Commencing on a true meridian of the first fountain of the river Pattawmack, thence verging towards the south unto the further bank of the said river and following the same on the west and south unto a certain place called Cinquack, situate near the mouth of said river where it disembogues into the said aforesaid bay of Chesapeake, and thence by the shortest line unto the aforesaid promontory or place called Watkins Point; thence a right line to the main ocean on the east.

The boundaries thus described are substantially the present boundaries, but for many years after they were adopted they remained a matter of controversy.

In the constitution of 1776 Virginia "reserved the property of the Virginia shores or strands [of Potomac and Pocomoke rivers] * * * and all improvements which have or will be made thereon." Maryland, in 1785, assented to this and declared [30] that

> the citizens of each State * * * shall have full property on the shores of the Potomac * * * with all emoluments and advantages thereunto belonging, and with the privilege of making and carrying out wharves and other improvements.

In 1785 a compact[31] was entered into between the States of Maryland and Virginia, but as this referred more particularly to the navigation and exercise of jurisdiction of the waters of Chesapeake Bay and Potomac and Pocomoke Rivers, it is not given here.

From 1821 to 1858 legislation was frequently enacted in regard to the Virginia boundary.[32] In 1858 commissioners were appointed by Maryland and Virginia, respectively, who, with the assistance of Lieut. N. Michler, United States Engineers, undertook the survey of the lines.

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[29] Maryland Hist. Soc. Coll. State Papers, vol. 4 LCB, pp. 63–64.

[30] 217 U. S. 579–580; Thorpe, F. N., op. cit., vol. 7, p. 3818.

[31] Hening, W. W., op. cit., vol. 13, p. 50.

[32] See report of C. J. Faulkner (commissioner for Virginia), relative to the boundary lines between Virginia and Maryland, published in Doc. 1, House of Delegates of Va., p. 73, 1832.

In 1860 the Governor of Virginia, under a resolution of the legislature, appointed an agent and sent him to England to collect records and documentary evidence bearing on this question, but owing to the Civil War nothing further was done until 1867, when legislation again commenced.

The question of this boundary was referred to arbitrators by an agreement made in 1874, in which each State bound itself to accept their award as final and conclusive. In 1877 the arbitrators made the following award:[33]

> Beginning at the point on the Potomac River where the line between Virginia and West Virginia strikes the said river at low-water mark, and thence following the meanderings of said river, by the low-water mark to Smith's Point, at or near the mouth of the Potomac, in the latitude 37° 53′ 8″, and longitude 76° 13′ 46″; thence crossing the waters of the Chesapeake Bay, by a line running north 65° 30′ east, about nine and a half nautical miles, to a point on the western shore of Smith's Island at the north end of Sassafras Hammock, in latitude 37° 57′ 13″, longitude 76° 2′ 52″; thence across Smith's Island south 88° 30′ east five thousand six hundred and twenty yards to the center of Horse Hammock, on the eastern shore of Smith's Island, in latitude 37° 57′ 8″, longitude 75° 59′ 20″; thence south 79° 30′ east four thousand eight hundred and eighty yards to a point marked A on the accompanying map, in the middle of Tangier Sound, in latitude 37° 56′ 42″, longitude 75° 56′ 23″, said point bearing from Janes Island light south 54° west, and distant from that light three thousand five hundred and sixty yards; thence south 10° 30′ west four thousand seven hundred and forty yards by a line dividing the waters of Tangier Sound, to a point where it intersects the straight line from Smith's Point to Watkins Point, said point of intersection being in latitude 37° 54′ 21″, longitude 75° 56′ 55″, bearing from Janes Island light south 29° west and from Horse Hammock south 34° 30′ east; this point of intersection is marked B on the accompanying map. Thence north 85° 15′ east six thousand seven hundred and twenty yards along the line above mentioned, which runs from Smith's Point to Watkins Point until it reaches the latter spot, namely, Watkins Point, which is in latitude 37° 54′ 38″, longitude 75° 52′ 44″; from Watkins Point the boundary line runs due east seven thousand eight hundred and eighty yards, to a point where it meets a line running through the middle of Pocomoke Sound, which is marked C on the accompanying map, and is in latitude 37° 54′ 38″, longitude 75° 47′ 50″; thence by a line dividing the waters of Pocomoke Sound north 47° 30′ east five thousand two hundred and twenty yards, to a point in said sound marked D on the accompanying map, in latitude 37° 56′ 25″, longitude 75° 45′ 26″; thence following the middle of the Pocomoke River by a line of irregular curves, as laid down on the accompanying map, until it intersects the westward protraction of the boundary line marked by Scarborough and Calvert, May 28th, 1668, at a point in the middle of the Pocomoke River, and in the latitude 37° 59′ 37″, longitude 75° 37′ 4″; thence by the Scarborough and Calvert line, which runs 5° 15′ north of east, to the Atlantic Ocean: the latitudes, longitudes, courses, and distances here given have

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[33] 20 Stat. L. 481–482. In the original report the degrees of latitude and longitude are given in words; they are here put in figures for convenient reference.

been measured upon the Coast Chart No. 33 of the United States Coast Survey (sheet No. 3, Chesapeake Bay).[34]

The middle thread of the Pocomoke River is equidistant as nearly as may be between the two shores without considering arms, inlets, creeks, or affluents as parts of the river, but measuring the shore from headland to headland.

* * * The low water mark on the Potomac to which Virginia has a right in the soil, is to be measured by the same rule.

The original charter to Lord Baltimore embraced the Potomac River to high-water mark on the south or Virginia shore,[35] but the arbitrators of 1877 changed the boundary to the low-water line, giving as their reason for doing so the long occupation by Virginia of the land above that line; they declared that "the length of time that raises a right of prescription in private parties likewise raises such a presumption in favor of States as well as private parties,"[36] and that "Virginia, from the earliest period of her history, used the south bank of the Potomac as if the soil to low-water mark had been her own."[37] The award of the arbitrators was accepted by the legislatures of the two States and was approved by act of Congress March 3, 1879.[38]

In 1879 and 1880 acts were passed by the Legislatures of Maryland and Virginia to appoint commissioners and to request the General Government to designate one or more officers of the Engineer Corps to survey and mark this line and erect monuments thereon, but little of permanent value seems to have been accomplished.[39]

In 1927 the Governors of Maryland and Virginia directed the State geologists to examine the west shore of the Potomac and to recommend points (headlands) between which straight lines should be drawn for the boundary. Their report,[40] submitted December 21, 1927, contains six maps on which are indicated by red lines the position recommended. The location of the boundary line as thus indicated was accepted by Virginia act approved March 26, 1928 (ch.

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[34] Three copies of this chart were prepared, one for each of the two States and one for the files of the Coast and Geodetic Survey, which show by red lines the boundary eastward from Smiths Point and the line up the Potomac for 18 miles. See Coast and Geodetic Survey Rept. for 1890, pp. 621–623.

[35] 174 U. S. 225.

[36] Title to United States or State land can not be acquired by adverse possession, even though long continued. The statute of limitations does not hold against the United States or a State where possession of land is concerned. 39 Fed. 654; 95 P. 278.

[37] 217 U. S. 580.

[38] 20 Stat. L. 481. The opinions and award of the arbitrators, together with a history of the grants and of the attempts previously made to settle the boundary disputes are given in a book of 97 pages, without date, printed in Washington. There is a copy of this book in the Geological Survey's library.

[39] See a brief report on the boundary between Maryland and Virginia in U. S. Coast and Geodetic Survey Rept. for 1890, pp. 621–623.

[40] Mathews, E. B., and Nelson, W. A., Report on the location of the boundary line along the Potomac River between Virginia and Maryland in accordance with the award of 1877, Baltimore, 1928. This report contains historical references to the boundary disputes between 1668 and 1889, acts of Virginia and of Maryland relating to boundaries, etc.

477) and by Maryland act of March 8, 1929 (ch. 50), and appropriations were made by each State for the surveying and marking of the line.

Commissioners were appointed by the States of Maryland and Virginia in 1916

> to mark and maintain with buoys placed at intervals of not more than one mile apart the line between the waters of the State of Maryland and the waters of the State of Virginia, from Cedar Straights in Pocomoke Sound to Williams Point in Pocomoke River.

Their report, with descriptions of marks established and some historical matter, was published in Baltimore in 1917.

The line across Chesapeake Bay from Smiths Island to Tangier and Pocomoke Sounds by way of Watkins Point was marked by buoys anchored to 1,000-pound masses of concrete.

Commissioners appointed in 1859 by Virginia and Maryland surveyed a line for the western boundary of Maryland from the "Fairfax Stone" (see p. 141), at the "first fountain" of the Potomac, north to the Pennsylvania line. This survey was accepted by Maryland but not by Virginia, nor was it accepted by West Virginia when made a State. An area of about 40 square miles remained in dispute until 1910, when commissioners appointed by the United States Supreme Court and acting under its direction resurveyed the line and placed the initial point, which thereby became the southwest corner of Maryland, on the south bank of the North Branch of Potomac River, 3,989 feet from the Fairfax Stone on a line N. 0° 56′ E. from it. From that point (monument No. 1) the line

> crosses the said North Branch of the Potomac, and thence running northerly, as near as may be, with the Deakins or old State line to the line of the State of Pennsylvania.

The "Deakins line" followed the boundaries of old land grants made by Maryland and Virgina and, as reestablished in 1910 by the commissioners, is a broken line with a general bearing a little east of north. There are five offsets in the line, which run nearly east and west and range in length from 54 to 971 feet. A large concrete monument was erected at each angle and many at intermediate points, 60 in all, on the line, which is nearly 36 miles long.

The following quotation from the report, dated October 31, 1911, of the commissioners to the Supreme Court of the United States, which was confirmed by the court May 27, 1912,[41] shows how boundary lines are often determined [42] (see pl. 10, *A*):

> a large anciently marked white oak tree. * * * This tree was cut and blocks were taken out by your commissioners which showed surveyors' axe

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[41] 225 U. S. 31.

[42] 225 U. S. 3. The National Geographic Magazine for December, 1929, describes in considerable detail the method for determining dates from the count of the annual growth of tree rings.

marks in the wood; one 130 years old, one 117 years, and the last 78 years, thus indisputably establishing this course as following the oldest marked line extant.

The computed position of the Fairfax Stone is latitude 39° 11′ 41.92″, longitude 77° 29′ 15.50″. Monument No. 1 is in latitude 39° 12′ 21.34″, longitude 79° 29′ 14.67″, and the monument on the Mason and Dixon line is in latitude 39° 43′ 15.88″, longitude 79° 28′ 37.72″. These positions are referred to the North American datum.

From monument No. 1 the boundary between Maryland and West Virginia runs along the south bank of the North Branch of the Potomac till it strikes the line between Virginia and West Virginia.

DISTRICT OF COLUMBIA

On September 5, 1774, the Continental Congress met at Philadelphia. Two years later it adjourned to Baltimore. During the Revolution and subsequent to the treaty of peace it met in various places. (See p. 246.) After the end of the war there was much debate in regard to the location of a permanent seat of the Government of the United States. Several States made propositions to Congress, offering to cede certain lands for the purpose, but no determination of the location was made by Congress until 1790.[43]

On December 23, 1788, the State of Maryland passed the following act:

> *Be it enacted by the general assembly of Maryland*, That the representatives of this State in the House of Representatives of the Congress of the United States, appointed to assemble at New York on the first Wednesday of March next, be, and they are hereby, authorized and required on the behalf of this State to cede to the Congress of the United States any district in this State, not exceeding ten miles square, which the Congress may fix upon and accept for the seat of government of the United States.

In the following year (December 3, 1789) the State of Virginia passed a similar act, from which the following is an extract:

> *Be it therefore enacted by the general assembly*, That a tract of country not exceeding ten miles square or any lesser quantity, to be located within the limits of the State and in any part thereof as Congress may by law direct, shall be, and the same is hereby, forever ceded and relinquished to the Congress and Government of the United States, in full and absolute right and exclusive jurisdiction, as well of said soil as of persons residing or to reside thereon, pursuant to the tenor and effect of the eighth section of the 1st article of the Constitution of the Government of the United States.

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[43] For reference to the discussions which resulted in selecting the site on the Potomac see Bryan, W. B., A history of the National Capital, vol. 1, ch. 1, New York, 1914. For a historical sketch of the area now included in the District of Columbia see 56th Cong., 2d sess., H. Doc. 552, 1901.

After long discussion Congress, in view of these cessions by Maryland and Virginia, passed an act, approved July 16, 1790, from which the following is an extract:[44]

> That a district of territory, not exceeding ten miles square, to be located as hereafter directed on the river Potomac, at some place between the mouths of the Eastern Branch and Connogochegue, be, and the same is hereby, accepted for the permanent seat of the government of the United States: *Provided, nevertheless,* That the operation of the laws of the State within such district shall not be affected by this acceptance until the time fixed for the removal of the Government thereto, and until Congress shall otherwise by law provide. * * * three commissioners, who, or any two of whom, shall, under the direction of the President, survey, and by proper metes and bounds define and limit, a district of territory, under the limitations above mentioned; and the district so defined, limited, and located shall be deemed the district accepted by this act for the permanent seat of the Government of the United States. * * * That on the first Monday in December, in the year 1800, the seat of the Government of the United States shall, by virtue of this act, be transferred to the district and place aforesaid.

In 1791 the foregoing act was amended, in order to include a portion of the Anacostia River ("Eastern Branch") and the town of Alexandria within the limits of the District. The following is an extract from the act of amendment, approved March 3, 1791:[45]

> * * * That so much of the act entitled "An act for establishing the temporary and permanent seat of the government of the United States" as requires that the whole of the district of territory, not exceeding ten miles square, to be located on the river Potomac for the permanent seat of the government of the United States, shall be located above the mouth of the Eastern Branch, be, and is hereby, repealed, and that it shall be lawful for the President to make any part of the territory below the said limit and above the mouth of Hunting Creek, a part of the said district, so as to include a convenient part of the Eastern Branch, and of the lands lying on the lower side thereof, and also the town of Alexandria; and the territory so to be included shall form a part of the district not exceeding ten miles square for the permanent seat of the government of the United States, in like manner and to all intents and purposes as if the same had been within the purview of the above recited act: *Provided,* That nothing herein contained shall authorize the erection of the public buildings otherwise than on the Maryland side of the river Potomac, as required by the aforesaid act.

In pursuance of the acts above cited three commissioners were appointed under whose direction surveys of the territory were to be made, and on March 30, 1791, President Washington issued a proclamation, in which the bounds of the District were defined as follows:[46]

> Beginning at Jones's Point, being the upper cape of Hunting Creek, in Virginia, and at an angle in the outset of 45 degrees west of the north, and running in a direct line 10 miles for the first line; then beginning again at the same

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[44] 1 Stat. L. 130.

[45] 1 Stat. L. 214.

[46] Bryan, W. B., op. cit., pp. 120, 132, 133.

Jones's Point and running another direct line at a right angle with the first across the Potomac, 10 miles for a second line; then, from the termination of the said first and second lines, running two other direct lines, of ten miles each, the one crossing the Eastern Branch aforesaid, and the other the Potomac, and meeting each other in a point.

In 1800 Congress removed to this District. In 1801 the District was divided into two counties, as follows:[47]

* * * the said district of Columbia shall be formed into two counties; one county shall contain all that part of said district which lies on the east side of the river Potomac, together with the islands therein, and shall be called the county of Washington; the other county shall contain all that part of said district which lies on the west side of said river, and shall be called the county of Alexandria; and the said river, in its whole course through said district, shall be taken and deemed to all intents and purposes to be within both of said counties.

In 1846 Congress passed an act providing for the retrocession to the State of Virginia of that part of the District of Columbia originally ceded to the United States by Virginia. The following is an extract from this act:[48]

That with assent of the people of the county and town of Alexandria, to be ascertained as hereinafter prescribed, all of that portion of the District of Columbia ceded to the United States by the State of Virginia, and all the rights and jurisdiction therewith ceded over the same, be, and the same are, hereby ceded and forever relinquished to the State of Virginia in full and absolute right and jurisdiction, as well of soil as of persons residing or to reside thereon.

The method prescribed for ascertaining the assent of the people of Alexandria was by viva voce vote of free white male citizens, to be taken before five commissioners appointed by the President.

There were 763 votes cast in favor of recession and 222 against it. The President, therefore, by proclamation dated September 7, 1846,[49] declared the act "in full force and effect." The southwestern boundary of the District of Columbia thus became coincident with that part of the boundary of Maryland prior to December 23, 1788, regarding which the United States Supreme Court stated[50]

that upon all the evidence, the charter granted to Lord Baltimore, by Charles I, in 1632, of the territory known as the Province of Maryland, embraced the Potomac River and the soil under it, and the islands therein, to highwater mark on the southern or Virginia shore; * * * nor was such grant affected by the subsequent grant to Lord Culpepper.

Congress in the act[51] approving the award of the arbitrators of 1877 for the States of Maryland and Virginia provided that nothing therein contained "shall be construed to impair or in any manner affect any rights of jurisdiction of the United States in and over the islands and waters" [of the Potomac].

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[47] 2 Stat. L. 105.

[48] 9 Stat. 35–36.

[49] 9 Stat. L. 1000.

[50] 174 U. S. 225.

[51] 20 Stat. L. 481.

Below are given extracts from an opinion by the Attorney General dated January 16, 1912, relating to the high-water line on the south bank of the Potomac as the boundary line between the District of Columbia and the State of Virginia.

> In the Potomac River there is a high-water line due to freshets at 13 feet above mean low tide. There is a high-tide line not influenced by freshets or caused by high winds at 8.8 feet above mean low tide. There is a mean high tide at about 5 feet above mean low water, and that is the elevation along which drift, trash, etc., remain as an indication; and there is a mean tide line at 3 feet above low water.
>
> High water mark in a river or stream is "the point to which the water usually rises in an ordinary season of high water."[52]
>
> "High-water mark is to be determined not from human records but from the records which the river makes for itself," and the true line is "that which the river impressed upon the soil as the limit of its dominion."[53]
>
> "High-water mark is coordinate with the limit of the bed of the water; and that only is to be considered the bed which the water occupies sufficiently long and continuously to wrest it from vegetation and destroy its value for agricultural purposes."[54]
>
> Farnham (Waters and water rights, vol. 2, p. 1461), gives the following as to high-water mark:
>
> "But the definition which best meets all requirements of the case and which has in fact been adopted by the weight of authority is that 'high-water mark is the point below which the pressure and action of the water are so common and usual and so long continued in all ordinary years as to make upon the soil a character distinct from that of the banks with respect to vegetation as well as with respect to the soil itself.'"[55]
>
> If the mean high tides at the 5-foot elevation above low-water mark appear to be the most usual line reached under all ordinary circumstances when the river is undisturbed either by freshets, unusual winds, and high tides, or unaffected by droughts, which condition is usually evidenced by drifts and other deposits, and to which line the rise is most constant, the pressure and action of the water upon the soil making the line more definite than at any other point, then the 5-foot mean high-tide line established by the action of the water above mean low water is legally the high-water mark or high-tide line, and consequently the boundary line.

In a Supreme Court decision rendered November 7, 1921,[56] involving the question whether the boundary between the District of Columbia and Virginia runs from "headland to headland," as the Maryland-Virginia boundary does, or follows the meanderings of the river, the latter course was accepted. The court also decided that the United States is entitled to the possession of land in the District that has been reclaimed by filling in below low-water line on the Virginia side. Jurisdiction and sovereignty over the tract in dispute in this case, comprising an area of 46.57 acres adjoining Alexandria, were transferred to Virginia by United States act approved February 23, 1927.[57]

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[52] Johnson *v.* Knott, 13 Oregon 308.

[53] Houghton *v.* The Chicago D. & M. R. Co.: 47 Iowa, 370–373.

[54] Carpenter *v.* Board of Commrs. Hennepin County: 56 Minn. 513.

[55] The following cases are in harmony with the authorities quoted above: Howard *v.* Ingersoll, 13 Howard, 415–423; Gould on Waters, 3d ed., 106; Shively *v.* Bowlby, 152 U. S. 12.

[56] Marine Railway and Coal Company *v.* United States of America: 257 U. S. 47.

The District Court of Appeals, in a decision rendered November 6, 1922, recognized the claim that high-water mark on the south bank of the Potomac is the boundary between the District of Columbia and Virginia.

The District of Columbia was planned to be exactly 10 miles square, but it has been found that the northeast side measures 263.1 feet and the southeast side 70.5 feet more than 10 miles. The lines do not bear exactly 45° from the meridian, but the greatest variation is only 1¾′.[58] The entire boundary of the District of Columbia was surveyed in 1791 and was marked with sandstone mileposts in 1792. These posts, except those at the four corners, were numbered from 1 to 9, counting clockwise, for each of the four boundary lines. The stone shown in Plate 9, *B*, after standing 130 years, was in 1922 still in so good condition that the inscription on the side facing the District of Columbia can be read easily in the engraving (from a photograph); the inscription on the opposite side is "Maryland"; that on the left is the declination of the compass, 0° 18′ E.; on the right is the year the stones were placed, 1792. The part of the stone above ground measures 12 by 12 by 24 inches.[59]

In 1915–1921 each of the original boundary stones was surrounded by an iron fence, erected by the District of Columbia and Virginia chapters of the Daughters of the American Revolution.

By a bill approved March 3, 1903,[60] funds were provided for additional marks on the District of Columbia-Maryland boundary line, to be placed at road crossings and at other prominent points. The work was completed the same year, but without the formal cooperation of any Maryland representative. The new marks are of cut granite, 6 inches square on top, and project 12 inches above ground.

The latitudes and longitudes of the north, east, and south corner stones of the District of Columbia are as follows:

	Latitude	Longitude
North corner	38° 59′ 45.38″	77° 02′ 28.48″
East corner	38° 53′ 34.23″	76° 54′ 33.94″
South corner	38° 47′ 25.15″	77° 02′ 27.01″

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[57] 44 Stat. L., pt. 2, p. 1176.

[58] For data regarding surveys and boundary marks see Baker, Marcus, Nat. Geog. Mag., vol. 6, pp. 149–165, 1894.

[59] See Shuster, E. A., Boundary stones of the District of Columbia: Nat. Geog. Mag., vol. 20, p. 356, 1909.

[60] 32 Stat. L. 961.

These positions are on North American datum.

The south corner stone at Jones Point, below Alexandria, which was the first one established, was set with appropriate ceremonies April 15, 1791.

By act of February 21, 1871,[61] the entire area within the boundary of the District was made a distinct government with the title of the District of Columbia and constituted a "body corporate for municipal purposes."[62]

The initial point of several of the original land grants upon which the city of Washington is founded was a mark on a large rock commonly called the "Key of all keys," which was then at the edge of the Potomac River. According to tradition, Braddock's army landed at this place on its way to Fort Duquesne. This rock has been covered with dirt and the river bed filled in so that the concrete pier and tablet established in 1910 over the mark are now more than 1,000 feet from the river's edge. The new mark is in the Naval Hospital grounds about 300 feet west from the corner of Twenty-third and B Streets NW.

The zero milestone, from which public highways of the United States are supposed to radiate, authorized by joint resolution of Congress June 5, 1920,[63] and dedicated June 4, 1923, is a granite pier 24 by 24 inches in section mounted on a concrete base and projecting 4 feet above ground, standing on the north edge of the Ellipse 900 feet south of the White House, in latitude 38° 53′ 42.32″, longitude 77° 02′ 12.49″. The tablet in the base is 28.65 feet above mean sea level.

VIRGINIA[64]

In 1606 King James I of England granted the "first charter" of Virginia. The boundaries therein described are as follows:[65]

> situate, lying, or being all along the Sea Coasts, between four and thirty degrees of *Northerly* Latitude from the Equinoctial Line and five and forty degrees of the same Latitude, and in the main Land between the same four and thirty and five and forty Degrees and the Islands thereunto adjacent, or within one hundred Miles of the coast thereof.

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[61] 16 Stat. L. 419.

[62] See 174 U. S. 196–359 for land history of the area covered by the District of Columbia from the time of the King's grant to Lord Baltimore, June 20, 1632, with reproductions of several old maps. This case gives many references to former decisions relating to riparian rights.

[63] 41 Stat. L. 1062.

[64] "The Commonwealth of Virginia" is the full legal name for this State. For a brief history of cessions to Virginia, the Carolinas, and Georgia and of boundary-line surveys between them from 1606 to 1821, see Haywood, John, The civil and political history of Tennessee, 2d ed., pp. 15–37, Nashville, 1891. For reference to old Virginia charters, abstracts of boundary descriptions, descriptions of boundary marks, etc., see Code of Virginia, vol. 1, pp. 10–22, Richmond, 1919.

[65] Thorpe, F. N., op. cit., vol. 7, p. 3783.

In 1609 a new charter was granted, called the "second charter" of Virginia, which defines the boundaries in the following terms[66] (see fig. 10):

> situate, lying, and being in that part of America, called *Virginia*, from the point of Land, called Cape or *Point Comfort*, all along the Sea Coast to the Northward, two hundred miles, and from the said point of *Cape Comfort*, all along the Sea Coast to the Southward, two hundred Miles, and all that Space and Circuit of Land, lying from the Sea Coast of the Precinct aforesaid, up into the Land, throughout from Sea to Sea, West and Northwest; And also all the Islands lying within one hundred Miles along the Coast of both Seas of the Precinct aforesaid.

In 1611–12 the "third charter" of Virginia was granted, which was an enlargement of the second. It gave the following territory:[67]

> all and singular those Islands whatsoever, situate and being in any Part of the Ocean Seas bordering upon the Coast of our said first Colony in *Virginia*, and being within three Hundred Leagues of any of the Parts heretofore granted to the said Treasurer and Company in our former Letters Patent as aforesaid, and being within or between the one-and-fortieth and thirtieth Degrees of Northerly Latitude.

The charter of 1609 gave Virginia a strip of land bordering on the coast for 200 miles northward from Point Comfort and for the same distance southward and extending inland west and northwest to the South Sea.[68] A point 200 miles due north of Point Comfort would fall in latitude 39° 54′, or about 13 miles north of the present south boundary of Pennsylvania. An irregular line 200 miles long, measured along the coast from Point Comfort, would reach about as far north as the Pennsylvania boundary. A point 200 miles due south from Point Comfort would fall in latitude 34° 06′. The territory included within these boundaries comprised, wholly or in part, the present States of Pennsylvania, New Jersey, Delaware, Maryland, North Carolina, and South Carolina and the vast region stretching west and northwest to the Pacific Ocean.

The area covered by the charter of 1611–12 included the Bermuda Islands.

In 1625 the colony was changed to a royal province, the three charters having been canceled by judgment of the Court of Kings Bench in the preceding year,[69] but Virginia still claimed the boundaries fixed by the charters.

The description "west and northwest" left the northern boundary of the colony poorly defined, but it was more definitely fixed when reductions in area were made by the charters to Maryland in 1632 and to Pennsylvania in 1681. The Connecticut charter of 1662 practically made the parallel of 41° the northern boundary. (See p. 102.) The charters of Carolina in 1663 and 1665 changed the southern boundary to its present statute position.

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[66] Thorpe, F. N., op. cit., vol. 7, p. 3795.

[67] Idem, p. 3804.

[68] Mar del Sur (South Sea) was the name given to the Pacific Ocean by Balboa in 1513, when he first saw it at a place where the shore line runs nearly east and west.

[69] Donaldson, Thomas, op. cit., p. 33.

The area of Virginia was still further reduced by the French treaty of 1763, which made the Mississippi River the west boundary, by the cession to the United States of the territory northwest of the Ohio River in 1784, by the admission of Kentucky as an independent State in 1792, by the division in 1863 when the new State of West Virginia was created and admitted to the Union, and finally by the transfer of two counties to West Virginia in 1866. (See fig. 10.)

By the constitution of 1776 Virginia formally gave up all claim to the territory now appertaining to the neighboring States of Maryland, Pennsylvania, North Carolina, and South Carolina, as will be seen by the following extract:

> The territories contained within the Charters erecting the Colonies of Maryland, Pennsylvania, North and South Carolina are hereby ceded, released, and forever confirmed, to the people of these Colonies, respectively, with all the rights of property, jurisdiction, and government, and all the rights whatsoever, which might at any time heretofore, have been claimed by Virginia, except the free navigation and use of the rivers Patomaque and Pokomoke, with the property of the Virginia shores and strands, bordering on either of said rivers, and all improvements, which have been or shall be made thereon. The western and northern extent of Virginia shall, in all other respects, stand as fixed by the charter of King James I, in the year one thousand six hundred and nine, and by the public treaty of peace between the Courts of Britain and France in the year one thousand seven hundred and sixty-three; unless by act of this Legislature one or more governments be established westwards of the Alleghany mountains.

In the meantime grants of territory had been made within the present limits of Virginia and West Virginia, which caused great dissatisfaction to the people of the Virginia Colony and which ultimately had an important bearing in settling the divisional line between Maryland and Virginia.

In the twenty-first year of Charles II (1670) a grant was made to Lord Hopton and others of what is still called "the northern neck of Virginia," which was sold by the other patentees to Lord Culpeper and confirmed to him by letters patent in the fourth year of James II (1689). This grant carried with it nothing but the right of soil and incidents of ownership, it being expressly subjected to the jurisdiction of the Government of Virginia. The tract of land thereby granted was "bounded by and within the heads of the rivers Tappahannock, alias Rappahannock, and Quiriough, alias Potowmack." On the death of Lord Culpeper this proprietary tract descended to Lord Fairfax, who had married Lord Culpeper's only daughter.

As early as 1729 difficulties arose from conflicting grants made by Lord Fairfax and the Crown. In 1730 Virginia petitioned the King, reciting that the head springs of Rappahannock and Potomac Rivers

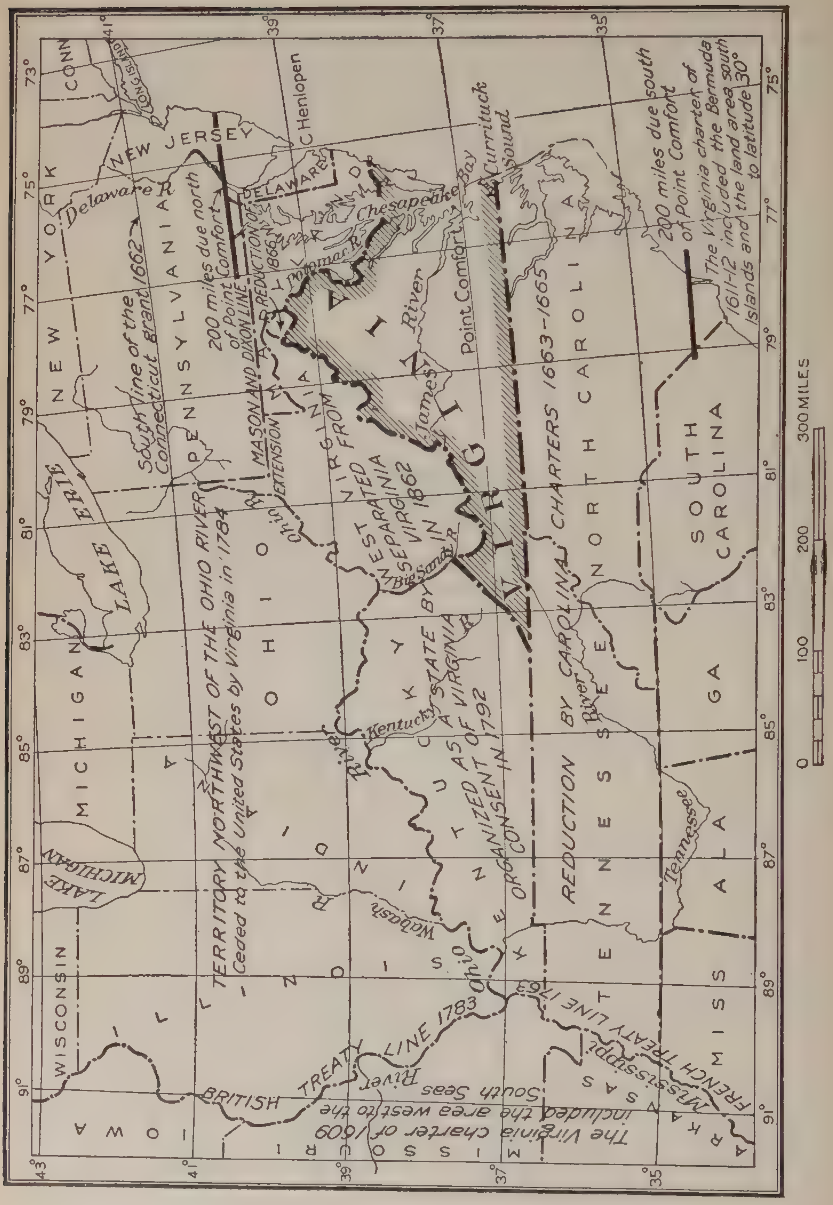
NEW YORK
CONN
LONG ISLAND
NEW JERSEY
Delaware R
PENNSYLVANIA
South line of the Connecticut grant 1662
200 miles due north of Point Comfort
MASON AND DIXON LINE
EXTENSION
REDUCTION OF 1866
DELAWARE
C Henlopen
MARYLAND
Potomac R
Chesapeake Bay
Currituck Sound
Point Comfort
James River
VIRGINIA
WEST VIRGINIA SEPARATED FROM VIRGINIA IN 1862
Big Sandy R
Ohio R
KENTUCKY
ORGANIZED AS A STATE BY CONSENT OF VIRGINIA IN 1792
Kentucky R
CHARTERS 1663-1665
REDUCTION BY CAROLINA
NORTH CAROLINA
SOUTH CAROLINA
200 miles due south of Point Comfort
The Virginia charter of 1611-12 included the Bermuda Islands and the land area south to latitude 30°
TENNESSEE
Tennessee R
GA
ALA
MISS
ARKANSAS
MISSOURI
Mississippi R
FRENCH TREATY LINE 1763
BRITISH TREATY LINE 1783
The Virginia charter of 1609 included the area west to the South Seas
TERRITORY NORTHWEST OF THE OHIO RIVER Ceded to the United States by Virginia in 1784
OHIO
INDIANA
ILLINOIS
Wabash R
LAKE ERIE
MICHIGAN
LAKE MICHIGAN
WISCONSIN
IOWA
73° 75° 77° 79° 81° 83° 85° 87° 89° 91°
43° 41° 39° 37° 35°
0 100 200 300 MILES

FIGURE 10.—Historical diagram of Virginia

were not known and praying that such measures might be taken that they might be ascertained to the satisfaction of all parties. In 1733 Lord Fairfax made a similar petition, asking that a commission might be appointed to ascertain, survey, and mark the true boundaries of his grant. An order was accordingly issued, and in 1736 three commissioners were appointed on the part of the Crown and three on the part of Lord Fairfax. The duty that devolved upon these commissioners was to ascertain by actual examination and survey the respective fountains of Rappahannock and Potomac Rivers. This survey was made in 1736. The report of the commissioners was referred to the council for plantation affairs in 1738, who reported their decision as follows:

> * * * The said boundary ought to begin at the first spring of the south branch of the river Rappahannock, and that the said boundary be from thence drawn in a straight line northwest to the place in the Alleghany Mountains where that part of the Potomac River, which is now called Cohongoroota, first rises. * * *

This report was confirmed by the King, and other commissioners were appointed to run out and mark the dividing line. The line was run in 1746. On October 17, 1746, the commissioners planted the Fairfax Stone at the spot which had been described and marked by the preceding commissioners as the true head spring of the Potomac and which, notwithstanding much controversy, has continued to be so regarded from that period to the present time. Besides limiting the Fairfax tract, this location was of greater importance as marking the southern point of the western boundary of Maryland.

A description of the original Fairfax Stone, as it appeared in 1859, was given in a report by Lieutenant Michler, as follows:

> It consists of a rough piece of sandstone, indifferent and friable, planted to the depth of a few feet in the ground and rising a foot or more above the surface; shapeless in form, it would scarce attract the attention of the passer by. The finding of it was without difficulty, and its recognition and identification by the inscription now almost obliterated by the corroding action of water and air.

When the commissioners for the Maryland-West Virginia boundary visited this locality in 1910 no trace of the original mark was found, although the mark set by Lieutenant Michler was readily identified. A large concrete monument was then built at this point.[70] As stated on page 131, these commissioners placed the monument marking the southwest corner of Maryland on the south bank of the North Branch of the Potomac, nearly 4,000 feet north of the Fairfax Stone.

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[70] For report of the commissioners, with description and position of each of the 34 monuments, see 225 U. S. 2–30. For references concerning Virginia, Maryland, and West Virginia boundaries see 217 U. S. 1–47.

This tract of land was held by Lord Fairfax and his descendants for many years, but subsequent to the Revolution the quitrents and similar charges were abolished, and it became in all respects subject to the jurisdiction of Virginia.

For the history and description of the boundary line between Virginia and Maryland see pages 127–131, and for the line between Virginia and West Virginia see page 145.

Kentucky formed originally a part of the county of Fincastle, Va. In 1776 this county was divided into three counties, the westernmost of which was called Kentucky County, and its eastern boundary was declared to be as follows:[71]

> A line beginning on the Ohio, at the mouth of Great Sandy Creek, and running up the same and the main or northeasterly branch thereof to the Great Laurel Ridge or Cumberland Mountains; thence southwesterly along the said mountain to the line of North Carolina.

Kentucky having been admitted into the Union June 1, 1792, commissioners were appointed in 1798 by Virginia and Kentucky to fix the boundary. In 1799–1800 the commissioners' report was made and ratified by the States. It was as follows:

> To begin at the point where the Carolina, now Tennessee, line crosses the top of the Cumberland mountains, near Cumberland Gap, thence northeastwardly along the top or highest part of the said Cumberland mountain, keeping between the headwaters of Cumberland and Kentucky rivers, on the west side thereof, and the headwaters of Powell's and Guest's rivers, and the Pound fork of Sandy, on the east side thereof, continuing along the said top, or highest part of said mountain, crossing the road leading over the same at the Little Paint Gap, where by some it is called the Hollow mountain and where it terminates at the West Fork of Sandy, commonly called Russell's fork, thence with a line to be run north 45° east till it intersects the other great principal branch of Sandy, commonly called the northeastwardly branch, thence down the said northeastwardly branch to its junction with the main west branch and down Main Sandy to its confluence with the Ohio.[72]

It will be seen that the northern part of this line is the present line between West Virginia and Kentucky.

In 1918 the Virginia Legislature[73] authorized the resurvey and marking of the part of the Kentucky line from Russell Fork to the West Virginia line, but Kentucky has not yet (1929) made any provision for this work.

The exact location of the boundary along "Great Sandy Creek" and its "northeasterly branch" (now called Big Sandy River and Tug Fork) is somewhat in doubt. The best evidence as to its proper position thus far found is that indicated on Bishop James Madison's map of Virginia, dated 1807, where it is shown as on the west bank of both streams. This evidence is in a measure confirmed by a clause in the West Virginia State Constitution of 1872, which is as follows:

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[71] Hening, W. W., Virginia Stat. L., vol. 9, p. 257, 1821.

[72] Shephard, Samuel, Virginia Stat. L., vol. 2, p. 234.

[73] Virginia Laws of 1918, ch. 386.

> The State of West Virginia includes the bed, bank and shores of the Ohio river, and so much of the Big Sandy river as was formerly included in the commonwealth of Virginia.

Virginia at one time owned the entire area of Kentucky and claimed territory north of the Ohio. Many court decisions have fixed the low-water line on the north bank of the Ohio as the boundary resulting from this claim. It therefore seems reasonable to assume that the Kentucky boundary should be so placed as to exclude the bed and shores to low-water mark on the west side of the two streams.

For the history of the settlement of the boundary between Virginia and North Carolina, see North Carolina, pages 149–151.

In 1779 Virginia and North Carolina appointed commissioners to run the boundary line between the two States west of the Allegheny Mountains, on the parallel of 36° 30′. The commissioners were unable to agree on the location of the parallel; they therefore ran two parallel lines 2 miles apart, the northern known as Henderson's line and claimed by North Carolina, the southern known as Walker's line and claimed by Virginia. In the year 1789 North Carolina ceded to the United States all territory west of her present boundaries, and as Tennessee was formed from the ceded territory, this question became one between Virginia and Tennessee.

Commissioners appointed by Virginia and Tennessee to establish the boundary adopted a compromise line. Their report was made in 1803 and was as follows:[74]

> A due west line equally distant from both Walker's and Henderson's, beginning on the summit of the mountain generally known as White Top mountain, where the northeast corner of Tennessee terminates, to the top of the Cumberland Mountain, where the southwestern corner of Virginia terminates.

This line, which is about a mile north of the Walker line, was marked on trees by five notches arranged in the form of a diamond and is often called the "diamond line." It was adopted by the legislatures of both States in 1803.

In 1871 Virginia passed an act for appointing commissioners to readjust this line. Tennessee the following year passed an emphatic resolution refusing to reopen the question regarding a boundary which she considered "fixed and established beyond dispute forever."[75]

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[74] Haywood, John, The civil and political history of Tennessee, p. 9, Knoxville, 1823; reprint, p. 23, Nashville, 1891. For report to the legislature by the Virginia commissioners, Thomas Walker and Daniel Smith, regarding the survey of this line, see idem (reprint), pp. 487–489. The report by the committee of the legislature is on page 497.

[75] Tennessee H. Jour. for Mar. 23, 1872, p. 71.

In 1889 Virginia took the matter to the Supreme Court of the United States, which in 1893 decreed that the line as surveyed and marked in 1803 is the true boundary.[76]

Until 1784 Virginia exercised jurisdiction over a large tract of country northwest of the Ohio River, but by a deed executed March 1, 1784, she ceded to the United States all that territory, thus making the northern part of her western boundary the north and northwest bank of the Ohio.

On December 31, 1862, the State of Virginia was divided, and 48 counties, composing the western part of the State, were made the new State of West Virginia. By an act of Congress in 1866 consent was given to the transfer of two additional counties from Virginia to West Virginia.

The Legislatures of Virginia in 1873 and West Virginia in 1877 authorized the appointment of commissions for "ascertaining and locating" the boundary between the two States wherever it was in dispute. Commissions were appointed, and an officer from the Corps of Engineers, United States Army, was detailed to aid in the work. So far as can be learned the survey and marking of this boundary have not been undertaken, and its location can be found only by following the old county lines, descriptions of which are given in the Virginia statutes.

References to the statutes by which the counties of Virginia and West Virginia were created can be found in an article by Morgan P. Robinson.[77] Most of the counties were created prior to 1800, and the references are to Hening's Statutes at Large of Virginia, but there have been many changes since that year.

The Grand Assembly of Virginia, in 1660, enacted that

> For the prevention of frequent suits and differences * * * all counties * * * shall * * * be limited within certaine naturall bounds * * *, and where naturall bounds are wanting to supply that defect by marked trees, which are to be viewed and renewed every three years by the neerest bordering inhabitants of each county and parrish in Easter week.[78]

WEST VIRGINIA

The separation of West Virginia from Virginia was approved by act of Congress of December 31, 1862,[79] and the new State was admitted to the Union by presidential proclamation dated April 20,

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[76] See 148 U. S. 528. For historical description and plat of the line consult records of the court for the October term, 1891; for geographic positions on the line see p. 184. For report of commissioners who surveyed the line in 1901–2 see 190 U. S. 64. For original maps of this survey see register No. 2634 of the archives of the Supreme Court. For reference to the Bristol cession see p. 184.

[77] Virginia counties—Those resulting from Virginia legislation: Virginia State Library Bull., vol. 9, Nos. 1, 2, and 3, January–July, 1916.

[78] Hening, W. W., op. cit., vol. 2, p. 18.

[79] 12 Stat. L. 633.

1863, effective June 19, 1863.[80] It is of historical interest that the name proposed for this State by the convention of 1861 was Kanawha.

It originally contained the following counties: Barbour, Boone, Braxton, Brooke, Cabell, Calhoun, Clay, Doddridge, Fayette, Gilmer, Greenbrier, Hampshire, Hancock, Hardy, Harrison, Jackson, Kanawha, Lewis, Logan, McDowell, Marion, Marshall, Mason, Mercer, Monongalia, Monroe, Morgan, Nicholas, Ohio, Pendleton, Pleasants, Pocahontas, Preston, Putnam, Raleigh, Randolph, Ritchie, Roane, Taylor, Tucker, Tyler, Upshur, Wayne, Webster, Wetzel, Wirt, Wood, Wyoming. In 1866, with the consent of Congress,[81] West Virginia was enlarged by the two counties of Berkeley and Jefferson, transferred from Virginia.

The boundary between West Virginia and Virginia is made up of boundary lines of the counties above enumerated that border on Virginia and can be defined only by reference to the laws by which these counties were created.[82]

In the constitution of 1872, after a recapitulation of the counties that were transferred from Virginia to West Virginia, is found the following clause defining the boundaries upon the south and west:[83]

> The State of West Virginia includes the bed, bank, and shores of the Ohio River and so much of the Big Sandy River as was formerly included in the Commonwealth of Virginia; and all territorial rights and property in, and jurisdiction over the same, heretofore reserved by and vested in the Commonwealth of Virginia, are vested in and shall hereafter be exercised by the State of West Virginia. And such parts of the said beds, banks, and shores as lie opposite and adjoining the several counties of this State, shall form parts of said several counties, respectively.

For a history of the boundaries of West Virginia, see Pennsylvania, pages 122–123; Maryland, pages 120, 122; and Virginia, page 144.

NORTH CAROLINA

In the year 1663 the "first charter" of Carolina was granted, which in 1665 was followed by the "second charter." The following extracts from these two charters define the boundaries.

CHARTER OF 1663[84]

> all that territory or tract of ground scituate, lying and being within our dominions of America, extending from the north end of the island called Lucke island, which lieth in the southern Virginia seas, and within six and thirty degrees of the northern latitude, and to the west as far as the south seas, and so southerly as far as the river St. Matthias, which bordereth upon the coast

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[80] 13 Stat. L. 731.

[81] 14 Stat. L. 350. See 11 Wallace, 39, for a historical sketch of this addition and court decisions relating thereto.

[82] Hening, W. W., Virginia Stat. L. from 1619 to 1792, vol. 2, p. 184, 1821.

[83] Thorpe, F. N., op. cit., vol. 7, p. 4034.

[84] Idem, vol. 5, p. 2744.

of Florida, and within one and thirty degrees of northern latitude, and so west in a direct line as far as the south seas aforesaid.

CHARTER OF 1665 [85]

* * * All that province, territory, or tract of land, scituate, lying or being within our dominions of America aforesaid; extending north and eastward, as far as the north end of Currituck river, or inlet, upon a strait westerly line to Wyonoak creek, which lies within or about the degrees of thirty-six and thirty minutes, northern latitude; and so west in a direct line as far as the South Seas. * * * and south and westward, as far as the degrees of twenty-nine, inclusive, of northern latitude; and so west, in a direct line, as far as the South-Seas; * * *

The second charter fixed the northern boundary at approximately the present location of the northern boundary of North Carolina.

Because of the great distance between the settlements in the northern and southern parts of the Province there was for many years a governor for each part. This condition finally resulted in the creation of separate Provinces, which became in full effect in 1729.[86] Disputes regarding the division line commenced as early as 1732 and were not finally settled until 1813. In 1815 the unmarked portion of the line was surveyed and marked, and the location was ratified by the legislature the same year.[87]

The following are positions for road crossings on the North Carolina-South Carolina line:[88]

Longitude	Latitude
78° 35′ 13.3″	33° 53′ 24.9″
80° 50′ 02.4″	34° 59′ 39.0″
80° 59′ 21.3″	35° 04′ 29.0″
80° 59′ 29.7″	35° 03′ 41.5″
81° 03′ 28.1″	35° 09′ 01.5″
81° 11′ 52.0″	35° 09′ 28.4″
81° 32′ 17.1″	35° 10′ 17.8″

In the constitution of North Carolina, adopted in 1776, this line is defined as stated in the subjoined extract:[89]

beginning on the sea side at a cedar stake, at or near the mouth of Little River (being the southern extremity of Brunswick county,) and running from thence a northwest course, through the boundary house, which stands in thirty-three degrees fifty-six minutes, to thirty-five degree north latitude, and from thence a west course so far as is mentioned in the charter of King Charles the Second to the late Proprietors of Carolina. Therefore, all the territories, seas, waters, and harbours, with their appurtenances, lying between the line above described, and the southern line of the State of Virginia, which begins on the sea shore, in thirty-six degrees thirty minutes north latitude, and from thence runs west, agreeable to the said Charter of King Charles, are the right and property of the people of this State, to be held by them in sovereignty; any partial line, without the consent of the Legislature of this State, at any time thereafter directed or laid out in anywise notwithstanding.

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[85] Thorpe, F. N., op. cit., vol. 5, p. 2762.

[86] In 148 U. S. 506 the date on which the separation was approved by the Crown is given as 1732, but 1729 is the date given in South Carolina, resources and population, p. 425, State Board of Agriculture, 1883; also by Mills, Robert, Statutes of South Carolina, p. 182, and appendix, p. 34, Charleston, 1826.

[87] See Cooper, Thomas, Statutes at Large of South Carolina, vol. 1, pp. 406–410, Columbia, 1836, for other details regarding this line.

[88] U. S. Geol. Survey Bull. 276, pp. 88–89, 1905; Bull. 310, pp. 65–66, 1907; Bull. 551, p. 281, 1914; Bull. 709, p. 877, 1923.

[89] Thorpe, F. N., op. cit., vol. 5, p. 2789.

* * * *And provided also*, That it shall not be construed so as to prevent the establishment of one or more governments westward of this State, by consent of the Legislature: * * *

On December 2, 1789, the Legislature of North Carolina passed an act ceding to the United States the western lands now constituting the State of Tennessee. (See fig. 10.) On February 25, 1790, the deed was offered, and on April 2, 1790, it was accepted by the United States.

In the Revised Statutes of North Carolina the boundaries of the State are described as follows: The north boundary, the parallel of 36° 30′; the south boundary, a line running northwest from Goat Island, on the coast in latitude 33° 56′, to the parallel of 35°, and thence along that parallel to Tennessee; and the west boundary is the Smoky Mountains. The intention had been from the earliest colonial times to establish the northern boundary upon the parallel of 36° 30′. This is the wording of every legislative act relating to it, and the errors of this boundary are due simply to errors in surveying.

The following description of the boundary lines of this State and of the various attempts made to locate them is taken from the report of the Geological Survey of North Carolina:[90]

The first and only serious attempt to ascertain the northern boundary was that made in 1728 by Col. Wm. Byrd and others, commissioners on the part of the two colonies, acting under royal authority. From the account given by Byrd of this undertaking, it appears that they started from a point on the coast whose position they determined by observation to be in 36° 31′ north latitude, and ran due west (correcting for the variation of the compass), to Nottoway [Blackwater] River, where they made an offset[91] of a half mile to the mouth of that stream, again running west. The line was run and marked 242 miles from the coast, to a point in Stokes County, on the upper waters of the Dan River (on Peter's Creek), the North Carolina commissioners accompanying the party only about two-thirds of the distance. Beyond this point the line was carried some 90 miles by another joint commission of the two colonies in 1749; this survey, terminating at Steep Rock Creek, on the east of Stone Mountain, and near the present northwest corner of the State, estimated to be 329 miles from the coast. In 1779 the line was taken up again at a point on Steep Rock Creek, determined by observation to be on the parallel of 36° 30′ (the marks of the previous survey having disappeared entirely), and carried west to and beyond Bristol, Tenn. This last is known as the Walker line [see p. 143], from one of the commissioners of Virginia.

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[90] Vol. 1, pp. 2–4, Raleigh, 1875.

[91] This break in the line is in accordance with an agreement made in 1727 between the governors of the two colonies. Its measured length is 2,977 feet. For text of the agreement and abstract of report of the commissioners who ran part of the line in 1779–80 see 148 U. S. 507–510.

These lines were run and the latitude observations taken with very imperfect instruments, and the variation of the compass was little understood, so that it was not possible to trace a parallel of latitude. The line, besides was only marked on the trees and soon disappeared, and as the settlements were very scattered, the location soon became a matter of vague tradition and presently of contention and litigation, so that in 1858, at the instance of Virginia, commissioners were appointed to relocate the line from the end of the Byrd survey westward; but for some reason they did not act. In 1870 commissioners were again appointed by Virginia and similar action asked on the part of this State; and the proposition was renewed in 1871, but ineffectually as before. In all these numerous attempts to establish the line of division between the two colonies and States the intention and the specific instructions have been to ascertain and mark, as the boundary of the two States, the parallel of 36° 30′. The maps published toward the end of the last century by Jefferson and others give that parallel as the line, and the Bill of Rights of North Carolina claims that "all territory lying between the line above described (the line between North and South Carolina) and the southern line of the State of Virginia, which begins on the seashore in 36° 30′ north latitude, and from thence runs west, agreeably to the charter of King Charles, are the right and property of this State." But it appears from the operations of the United States Coast Survey at both ends of the line that the point of beginning on Currituck Inlet, instead of being, as so constantly assumed, in latitude 36° 30′, or as determined by the surveyors in 1728, 36° 31′, is 36° 33′ 15″, and the western end (of "the Walker line," of 1779, at Bristol, Tenn.), 36° 34′ 25.5″. [See p. 143 for later data.] It is stated in Byrd's Journal that the variation of the compass was ascertained to be a little less than 3° W. (The magnetic chart of the United States Coast Survey would make it E.) And no account is given of any subsequent correction, and if none was made at the end of the line surveyed by him the course would have been in error by nearly 3°, as the amount of variation in this State changes a little more than 1° for every 100 miles of easting and westing. So that the northern boundary of the State as run is not only not the parallel of 36° 30′ but is far from coincident with any parallel of latitude and must be a succession of curves, with their concavities northward and connected at their ends by north and south offsets.

The southern boundary between this State and South Carolina and Georgia was first established by a joint colonial commission in 1735 to 1746. The commissioners ran a line from Goat Island, on the coast (in latitude 33° 56′, as supposed), northwest to the parallel of 35°, according to their observations, and then due west to within a few miles of the Catawba River, and here, at the old Salisbury and Charleston road, turned north along that road to the southeast corner of the Catawba Indian lands. This line, resurveyed in 1764, was afterward (in 1772) continued along the eastern and northern boundaries of the Catawba lands to the point where the latter intersects the Catawba River; thence along and up that river to the mouth of the South Fork of the Catawba, and thence due west, as supposed, to a point near the Blue Ridge. This part of the line was resurveyed and confirmed by commissioners under acts of Assembly of 1803, 1804, 1806, 1813, 1814, and 1815, and continued west to and along the Saluda Mountains and the Blue Ridge to the intersection of the "Cherokee boundary" of 1797, and thence in a direct line to the Chatooga River at its intersection with the parallel of 35°. From this point the line was run west to the Tennessee line, between this State and Georgia, in 1807,[92] and confirmed and established by act of 1819.

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[92] This is an error. The line was run in 1819.

The boundary between this State and Tennessee was run according to the course designated in the act of 1789, entitled "An act for the purpose of ceding to the United States certain western lands therein described" (the State of Tennessee)—that is, along the crest of the Smoky Mountains, from the Virginia line to the Cataluche River (in Haywood County), in 1799, under act of 1796. It was continued from this point to the Georgia line in 1821. The commissioners who completed this line, at the date last mentioned, instead of following their instructions, diverged from the crest of the Smoky (Unaka) Mountains at the intersection of the Hiwassee turnpike and ran due South [93] to the Georgia line, thereby losing for the State the valuable mining region since known as Ducktown.

And as to the southern boundary, the point of beginning on Goat Island is in latitude 33° 51′ 37″, as shown by the Coast Survey, and instead of running from Goat Island northwest to latitude of 35° and thence along that parallel, it appears, from the South Carolina geographical State survey of 1821–1825, that the course from the starting point is N. 47° 30′ W., and instead of pursuing the parallel of 35°, it turns west about 10 miles south of that line, and then, on approaching the Catawba River, turns northward, pursuing a zigzag line to the forks of the Catawba River, which is about 12 miles north of that parallel; and from this point to the mountains the boundary line (of 1772) runs, not west, but N. 88° W., bringing its western end about 17 miles too far north and reaching the (supposed) parallel of 35° at a distance of about 130 miles west of the Catawba River. The loss of territory to the State resulting from these singular deviations is probably between 500 and 1,000 square miles.

The United States Geological Survey has determined several approximate positions for points on the North Carolina-Virginia line, three of which are as follows:

Longitude	Latitude
77° 31′ 50″	36° 32′ 42.6″
79° 24′ 00″	36° 32′ 29.6″
79° 29′ 19″	36° 32′ 21.9″

Four latitude stations were established near the east end of this line by the United States Coast and Geodetic Survey in 1886–87.[94]

The following extract from the Tennessee constitution of 1796 defines the eastern boundary of that State, which is the western boundary of North Carolina, as it was intended to be run and marked:[94a]

> Beginning on the extreme height of the Stone Mountain at the place where the line of Virginia intersects it, in latitude thirty-six degrees and thirty minutes north; running thence along the extreme height of the said mountain to the place where Watauga River breaks through it; thence a direct course to the top of the Yellow Mountain, where Bright's road crosses the same; thence along the ridge of said mountain, between the waters of Doe River and the waters of Rock Creek, to the place where the road crosses the Iron Mountain; from thence along the extreme height of said mountain to where Nolichucky River runs through the same; thence to the top of the Bald Mountain; thence along the extreme height of said mountain to the Painted Rock, on French Broad River; thence along the highest ridge of said mountain to the place where it is called the Great Iron or Smoky Mountain; thence along the extreme height of said

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[93] Probably run on compass meridian; the line as marked actually runs about 6° west of true south.

[94] For descriptions see U. S. Coast and Geodetic Survey Special Pub. 110, p. 228, 1925.

[94a] Thorpe, F. N., op. cit., vol. 6, p. 3424.

mountain to the place where it is called Unicoi or Unaka Mountain between the Indian towns of Cowee and Old Chota; thence along the main ridge of the said mountain to the southern boundary of this State, as described in the act of cession of North Carolina to the United States of America. * * *

Commissioners appointed by authority of the Legislature of North Carolina surveyed and marked a part of the Tennessee line in 1799. Beginning at the Virginia line they ran southwestward along the crest of the mountains to the highest pinnacle of the Smoky Mountains beyond the French Broad River, where they stopped. Neither Tennessee nor the United States was represented in this survey. A certified copy of the field notes was given to Tennessee in 1803, but it does not appear that the line as run was ratified by either State. North Carolina was, however, apparently bound by the action of its commissioners.

In 1819 North Carolina authorized the extension of the line of 1799,[95] and in 1820 Tennessee took like action. The line was completed to the Georgia State line, and the extension was formally ratified by both States in 1821. The original map for the 1821 survey of the North Carolina-Tennessee line is said to be in the State archives in Nashville. The original notes by W. Davenport, surveyor, were lost for many years but were found in 1910 and copies were made, one of which is in the United States Geological Survey office.

In 1885 commissioners were appointed to rerun the part of the line of 1799 from Iron Mountain at Indian Grove Gap to the point where the Jonesboro and Asheville road passes over Bald Mountain. The line was run in 1886, but the commissioners failed to agree on a part of the line about 6 miles long near the Nolichucky River. The North Carolina commissioner followed as closely as possible the survey of 1799, but the Tennessee commissioner insisted on a line about a mile farther east. The report of the North Carolina commisioner is given in full in Document 22 of the North Carolina Legislature, session of 1887. No further action appears to have been taken by either State toward a settlement of this dispute, but in 1915 a suit involving the proper location of the boundary was decided in the Tennessee Supreme Court in favor of the line as marked by the North Carolina commissioner.[96]

The commissioners who surveyed the southern part of the west boundary of North Carolina in 1821 depended almost entirely on blazes on trees for their marks, and, although they did not run out the line as described by statute, the entire line as marked was accepted by the legislatures of the two States.

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[95] Laws of North Carolina for 1819, ch. 11.

[96] See Thompson, F. M., Reports of cases in the Supreme Court of Tennessee, vol. 7, pp. 35–66, 1916 (Tennessee Repts., No. 134), for an account of this survey.

In recent years many disputes regarding the exact location of parts of the line have arisen, and they were finally taken to the Supreme Court of the United States. Commissioners appointed to re-mark the boundary filed their report October 29, 1915, having re-marked the line from the point where it first intersects the Little Tennessee River down the north side of the river about half a mile, thence across the river and up Slickrock Creek to a point near the mouth of Big Stack Gap Branch, thence up a ridge leading to Big Fodderstack Mountain, thence along the main ridge to a place locally known as "County Corners," thence along State Ridge to the Tellico River, thence in a southwesterly course to the top of Jenks Knob. South of this point sufficient marks of the survey of 1821 were known to fix the line as above described.[97]

The approximate position for the southwest corner of North Carolina and the southeast corner of Tennessee at a point on the Georgia line is latitude 34° 59′ 17″, longitude 84° 19′ 19″.

In 1879 the legislature passed an act to appoint commissioners to make a survey from the northeast corner of Georgia westward. This point of commencement is common to North Carolina, South Carolina, and Georgia.

In 1881 the legislature passed another act providing for the appointment of a commissioner, who should act with commissioners from Virginia, South Carolina, Georgia, or Tennessee, to rerun and re-mark the boundaries between North Carolina and the other States.

In 1888 a joint commission reran the Byrd line of 1728 between the ocean at Currituck Inlet and the Nottoway [now Blackwater] River, a distance of 59½ miles,[98] 28 appropriately marked granite monuments were established, and astronomic determinations of latitude were made for five of them as follows (the longitudes are approximate):

Monument No. 2, Knott Island, latitude 36° 32′ 59″, longitude 75° 55.7′.

Monument No. 7, Northwest River, latitude 36° 33′ 00″, longitude 76° 11.6′.

Monument No. 11, Dismal Swamp Canal, latitude 36° 33′ 02″, longitude 76° 22.7′.

Monument No. 13, latitude 36° 33′ 01″, longitude 76° 33.5′.

Monument No. 28, Nottoway [now Blackwater] River, latitude 36° 32′ 36″, longitude 76° 56′.

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[97] See 235 U. S. 3–17 for the decision of the court, which includes a historical description of the line and extracts from the field notes of the 1821 survey; and 240 U. S. 652 for report of commissioners. See Tennessee Hist. Soc. Mag., July, 1920, for description of the survey of this line.

[98] See North Carolina Pub. Doc. 31, sess. of 1889, for a full report.

SOUTH CAROLINA[99]

The territory within the present State of South Carolina was included in the charter of Carolina, which also embraced what is now the State of Georgia. (See North Carolina, pp. 145–146.)

The settlement of Carolina under the charter of 1665 had been carried on from two points, and

> While there had been no formal division of the domain into distinct territories, these settlements at the two points had at first distinct governments; and the northern portion had gradually acquired the informal designation of North Carolina; the southern that of South Carolina.[1]

In 1719 there was a concerted revolt by the southern settlements against the proprietary government of Carolina, but not until 1729 was the separation of the two colonies formally recognized by the Parliament of Great Britain.

For a history of the settlement of the boundary between North Carolina and South Carolina, see North Carolina, pages 146–147.

By the charter of Georgia (1732) the line between South Carolina and Georgia was to be the Savannah River to its head. In 1762, difficulties having arisen concerning the interpretation of the charter, the head of the Savannah, and the title to the lands south of the Altamaha River claimed by South Carolina, Georgia made complaint to the King, who issued a proclamation in 1763 giving the lands between the Altamaha and St. Marys Rivers to Georgia. The question of the boundary on the Savannah, however, remained unsettled until 1787, when a convention between the two States was held at Beaufort, S. C., to determine it, and the line was fixed as at present. (See fig. 11.) The following is an extract from the articles of agreement:[2]

> The most northern branch or stream of the river Savannah from the sea or mouth of such stream to the fork or confluence of the rivers now called Tugaloo and Keowa, and from thence the most northern branch or stream of the said river Tugaloo till it intersects the northern boundary line of South Carolina, if the said branch or stream of Tugaloo extends so far north, reserving all the islands in the said rivers Savannah and Tugaloo to Georgia; but if the head spring or source of any branch or stream of the said river Tugaloo does not extend to the north boundary line of South Carolina, then a west line to the Mississippi, to be drawn from the head spring or source of the said branch or stream of Tugaloo River which extends to the highest northern latitude, shall forever hereafter form the separation, limit, and boundary between the States of South Carolina and Georgia.

In the same year South Carolina ceded to the United States a strip of territory which she claimed, about 12 or 14 miles wide, south of the

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[99] For copies of laws, reports of commissioners, and references to documents relating to the boundary lines of this State from 1576 to 1815 see Cooper, Thomas, op. cit., vol. 1, pp. 404–421.

[1] McCrady, Edward, The history of South Carolina under the Royal Government, 1719–1776, p. 3, New York, 1899.

[2] 1 Stat. L. 466.

North Carolina line and extending from the source of the Chattooga River to the Mississippi. South Carolina's claim to this narrow strip south of the 35th parallel was based on inadequate geographic information. It was no doubt believed that the source of the "most northern branch or stream of the said river Tugaloo" was some distance south of the North Carolina line, but recent surveys show that the headwaters of the Chattooga, which is a branch of the Tugaloo, are north of the 35th parallel and within the limits of North Carolina.[3] Although South Carolina thus had no right to claim this strip, later disputes regarding it were made impossible by its cession to the United States in 1787 and the cession of the eastern part to Georgia by the United States in 1802. (See p. 154.) W. R. Garrett, in a paper read before the South Carolina Historical Society November 8, 1881,[4] stated that "The lines described did, therefore, include something and did convey a real title." With this conclusion the present writer does not agree.

In 1917 the Legislature of Georgia authorized the bringing of suit in the Supreme Court of the United States in order to settle a long-standing dispute between that State and the State of South Carolina regarding their common boundary. The court decision, rendered January 30, 1922, is in part as follows:[5]

> (1) Where there are no islands in the boundary rivers the location of the line between the two States is on the water midway between the main banks of the river when the water is at ordinary stage; (2) where there are islands the line is midway between the Island bank and the South Carolina shore when the water is at ordinary stage; and (3) that islands in the Chattooga River are reserved to Georgia as completely as are those in the Savannah or Tugaloo rivers.

GEORGIA

Georgia was included in the proprietary charter granted to the lords proprietors of Carolina in 1662 and 1663, for which a provincial charter was substituted in 1719.

In 1732 the charter of Georgia as an independent colony was granted by King George II. The following is an extract:[6]

> all those lands, countrys, and territories, situate, lying and being in that part of South Carolina, in America, which lies from the most northern part of a stream or river there, commonly called the Savannah, all along the sea coast to the southward, unto the most southern stream of a certain other great water or river called the Alatamaha, and westerly from the heads of the said rivers, respectively, in direct lines to the south seas, * * * with the islands of the sea, lying opposite to the eastern coast of the said lands, within twenty leagues of the same. * * *

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[3] See U. S. Geol. Survey map of the Cowee quadrangle, N. C.–S. C.

[4] History of South Carolina cession, p. 11. See also Battle, C. E., The Georgia-Tennessee boundary dispute: Georgia Bar Assoc. Rept. Nineteenth ann. sess., p. 101, Atlanta, 1902; and 13 Howard 405–406.

[5] See 257 U. S. 517 and 259 U. S. 572.

[6] Thorpe, F. N., op. cit., vol. 2, p. 771.

This charter was surrendered in 1752, and a provincial government was established.

In 1763 the territory between the Altamaha and St. Marys Rivers was added to Georgia by royal proclamation. (See South Carolina, p. 152.)

In the constitution adopted by Georgia in 1798 the boundaries are thus described (see fig. 11):[7]

> The limits, boundaries, jurisdictions, and authority of the State of Georgia do, and did, and of right ought to extend from the sea or mouth of the river Savannah, along the northern branch or stream thereof, to the fork or confluence of the rivers now called Tugalo and Keowee, and from thence along the most northern branch or stream of the said river Tugalo, till it intersect the northern boundary line of South Carolina, if the said branch or stream of Tugalo extends so far north, reserving all the islands in the said rivers Savannah and Tugalo to Georgia; but if the head, spring, or source of any branch or stream of the said river Tugalo does not extend to the north boundary line of South Carolina, then a west line to the Mississippi, to be drawn from the head, spring, or source of the said branch or stream of Tugalo River, which extends to the highest northern latitude; thence down the middle of the said river Mississippi until it shall intersect the northernmost part of the thirty-first degree of north latitude, south by a line drawn due east from the termination of the line last mentioned, in the latitude of thirty-one degrees north of the equator, to the middle of the river Apalachicola or Chatahoochee; thence along the middle thereof, to its junction with Flint River; thence straight to the head of Saint Mary's River, and thence, along the middle of Saint Mary's River, to the Atlantic Ocean, and from thence to the mouth or inlet of Savannah River, the place of beginning, including and comprehending all the lands and waters within the said limits, boundaries, and jurisdictional rights; and also all the islands within twenty leagues of the seacoast.

In 1802 articles of agreement were entered into whereby Georgia ceded to the United States the lands west of its present boundaries, and the United States ceded to Georgia the eastern part of the South Carolina cession of 1787. (See South Carolina, p. 152.)

The following extracts show the limits of the two cessions:[8]

> The State of Georgia cedes to the United States all the right, title, and claim which the said State has to the jurisdiction and soil of the lands situated within the boundaries of the United States, south of the State of Tennessee and west of a line beginning on the western bank of the Chatahouchie River where the same crosses the boundary line between the United States and Spain; running thence up the said River Chatahouchie, and along the western bank thereof to the great bend thereof, next above the place where a certain creek or river, called "Uchee" (being the first considerable stream on the western side, above the Cussetas and Coweta towns), empties into the Chatahouchie River; thence in a direct line to Nickajack, on Tennessee River; thence crossing the said last-mentioned river, and thence running up the said Tennessee River and along the western bank thereof to the southern boundary line of the State of Tennessee.

* * * * * * *

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[7] Thorpe, F. N., op. cit., vol. 2, p. 794.

[8] Georgia act of Apr. 24, 1802.

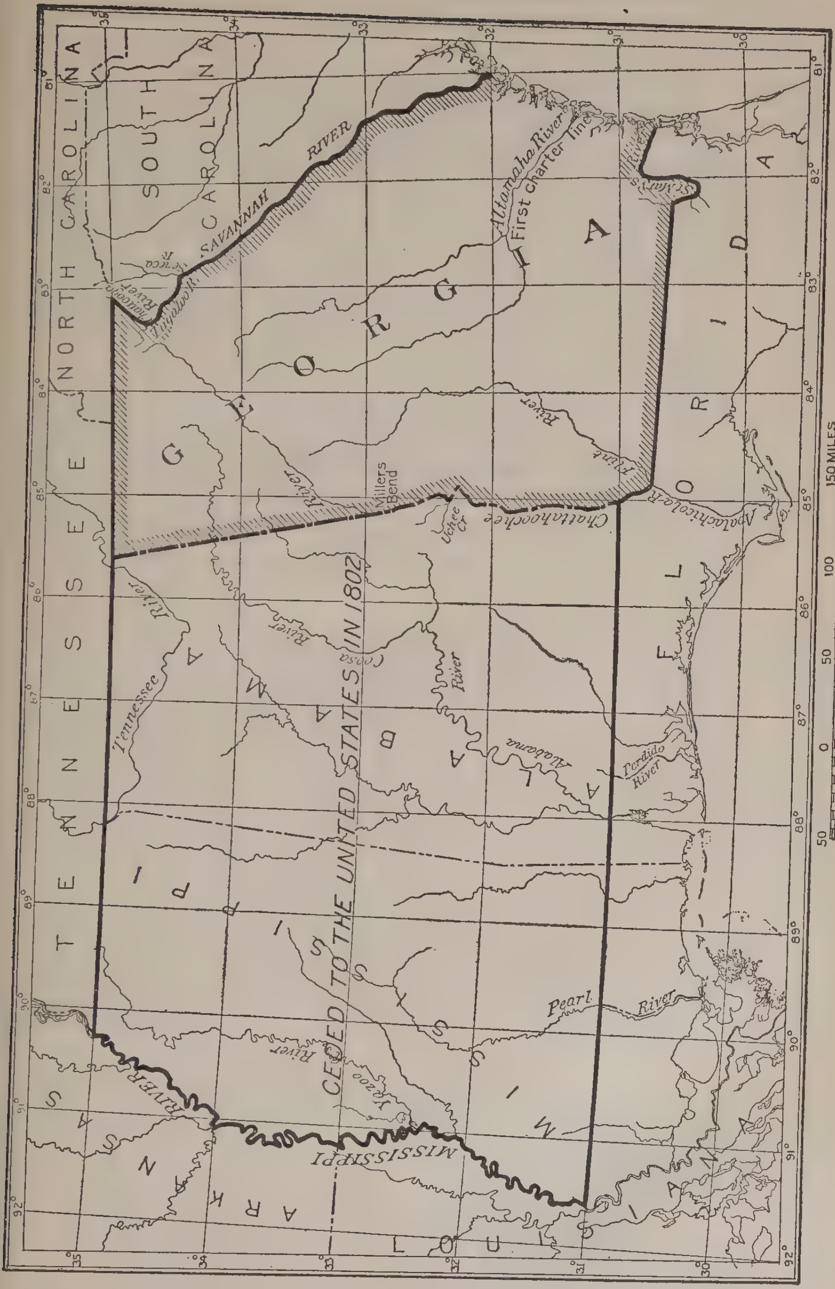
NORTH CAROLINA
SOUTH CAROLINA
TENNESSEE
GEORGIA
ALABAMA
MISSISSIPPI
ARKANSAS
LOUISIANA
FLORIDA
SAVANNAH RIVER
Keowee River
Seneca R.
Tugaloo R.
Altamaha River
First charter line
St. Marys River
Flint River
Millers Bend
Uchee Cr.
Chattahoochee
Apalachicola R.
River
Coosa River
Tennessee River
River
Alabama
Perdido River
Pearl River
Yazoo River
MISSISSIPPI RIVER
CEDED TO THE UNITED STATES IN 1802
50 0 50 100 150 MILES

FIGURE 11.—Historical diagram of Georgia

> The United States * * * cede to the State of Georgia * * * the lands * * * situated south of the southern boundaries of the States of Tennessee, North and South Carolina, and east of the boundary line herein above described as the eastern boundary of the territory ceded by Georgia to the United States.

For lands ceded to the United States Georgia was to be paid $1,250,000 from the net proceeds of land to be sold.[9]

For a history of the boundary between Georgia and South Carolina, see South Carolina, page 152.

The history of the boundary between North Carolina and Georgia has already been given. (See p. 150.) It may be proper, however, to add that this line (the 35th degree of north latitude) was fixed by the cession, above detailed, from the United States to Georgia of that part of the South Carolina cession east of the present western boundary of Georgia.

A long controversy ensued between Georgia and North Carolina regarding the boundary, with no results until 1810, when Georgia empowered its governor to employ Andrew Ellicott to ascertain the true location of the 35th degree of latitude. Ellicott did so, and the point fixed by him was acquiesced in by both States.[10]

The boundary between Georgia and Tennessee was established in 1818 and is described as follows:[11]

> Beginning at a point in the true parallel of the thirty-fifth degree of north latitude, as found by James Camak, mathematician on the part of the State of Georgia, and James S. Gaines, mathematician on the part of the State of Tennessee, on a rock about two feet high, four inches thick, and fifteen inches broad, engraved on the north side thus: "June 1st, 1818; var. 6¾ east," and on the south side thus: "Geo. lat. 35 north; J. Camak," which rock stands one mile and twenty-eight poles from the south bank of the Tennessee river, due south from near the center of the old Indian town of Nickajack, and near the top of the Nickajack Mountain, at the supposed corner of the states of Georgia and Alabama; thence running due east, leaving old D. Ross two miles and eighteen yards in the State of Tennessee, and leaving the house of John Ross about two hundred yards in the State of Georgia, and the house of David McNair one mile and one-fourth of a mile in the State of Tennessee, with blazed and mile-marked trees, lessening the variation of the compass by degrees, closing it at the termination of the line on the top of the Unicoi Mountain at five and one-half degrees.

Another line for the boundary between Georgia and Tennessee, based on new observations for latitude, was run in 1826 by James Camak, along a parallel about 37.9 chains north of the line run by him in 1818, but apparently it was not accepted by either State as the true line. Attempts have been made by Georgia to have the line relocated, but the line as run in 1818 still stands as the accepted boundary, although in places it is a mile south of the 35th parallel.

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[9] Donaldson, Thomas, op. cit., p. 80.

[10] See Cobb, T. R. R., Digest of State laws of Georgia to 1851, p. 150, 1851.

[11] Tennessee Laws, 1817–1820, vol. 2, p. 475; Georgia acts, 1810–1819, p. 1217; see also Haywood, John, op. cit., p. 13. The description given by Haywood differs slightly in wording from the others, but the essential features are the same. A copy of the map of the survey is on file in the office of the Georgia Secretary of State.

The present boundary between South Carolina and Georgia is thus described:[12]

> Beginning at the mouth of the Savannah River; along the river to the junction of the Kiowee, and along the Tugaloo to the junction of the Tallulah and Chattooga; thence along the Chattooga to a point on the 35th parallel of north latitude, at the union of the northern boundary of South Carolina and the southern boundary of North Carolina. The general course is about N. 35° W., and the length, in a direct line, about 247 miles. It terminates at Ellicott's Rock, on the Chattooga River, marked "Lat. 35°, A. D. 1813. N. C., S. C."
>
> This line, in conformity with the treaty of Beaufort, separates Georgia from South Carolina (all the islands of the rivers Savannah, Tugaloo, and Chattooga being reserved to Georgia).

The boundary between Georgia and Florida was fixed by the treaty of 1783, between the United States and Great Britain, substantially as at present, namely:

> Commencing in the middle of the Apalachicola or Catahouche River, on the thirty-first degree of north latitude; thence along the middle thereof to its junction with the Flint River; thence straight to the head of Saint Marys River, and thence down the middle of that river to the Atlantic Ocean.

This boundary was affirmed by the treaty of 1795 between the United States and Spain.

In 1799 Andrew Ellicott, as commissioner for the United States, was directed to survey and mark this line from the Mississippi to the Atlantic Ocean. From a point near the Mississippi, determined by him as on the 31st parallel, he ran a line due east to a point near the mouth of the Flint River, the latitude of which he determined as 30° 42′ 42.8″, where he was forced to stop work because of hostile Indians. He then proceeded by water to the St. Marys River and up that river to what he took to be the source of its longest branch, where he erected a large mound, the latitude of which he reported as "about 30° 34′ N."[13]

The line joining these two marks had not yet been surveyed when Spain ceded the Floridas to the United States in 1819, and the uncertainty regarding the position of this boundary was the cause of many disputes, which became more acute as the country became more thickly settled. Georgia claimed that the headwaters of the St. Marys were at the source of a southern branch. This claim if conceded would give additional territory to that State variously estimated at 800 to 2,355 square miles. On the other hand, the United States commissioners maintained that the real source of the St. Marys was 2 miles north of the Ellicott mound.

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[12] Janes, T. P. (Commissioner of Agriculture), Handbook of the State of Georgia, p. 120, Atlanta, 1876.

[13] Ellicott's journal relating to this survey, with maps, etc., was published in 1803 by Budd & Bartram, for Thomas Dobson, at the Stone House, 41 South Second Street, Philadelphia, and again in 1814 by William Fry, of Philadelphia.

Apparently Georgia, at least temporarily, accepted the Ellicott mound as the proper eastern terminus of the straight boundary, and some time before 1825 had the "Watson line" run between the two marks established by Ellicott. It is uncertain when this line was run and whether it was ordered run by Georgia, although it is referred to in official documents as having been run by that State.

In 1825 a second line was run by D. F. McNeil, a contract surveyor for the United States General Land Office, and this line although not formally accepted by the General Land Office, was looked upon for more than 20 years as the proper location of the boundary.

In 1826 Congress authorized the survey and marking of a line which

> shall be run straight from the junction of said rivers Chatahoochie and Flint to the point designated as the head of Saint Marys River.

Georgia, not content with either the Watson or the McNeil line, continued to press her claims and in 1827 passed an act forbidding any surveys of public land in the disputed territory (south of the Ellicott mound line) without authority of law.

In 1846 both Georgia and Florida consented to the appointment of commissioners who should fix the boundary, and this action resulted in 1859 in the running of the "Orr and Whitner line" between the mouth of the Flint River and the Ellicott mound on the St. Marys. The line as then marked was accepted by Florida in 1861 and by Georgia in 1866.

All three of the lines described are indicated on township plats of the General Land Office in Florida book No. 43.[14]

The southern boundary of Georgia is thus described:[15]

> Thence down the western bank of the river [Chattahoochee] at high water mark to its junction with Flint River, at a point now four chains below the actual junction—latitude 30° 42′ 42″, longitude 80° 53′ 15″. The average direction of this line is about S. 6° E., and distance about 150 miles direct. About 130 miles it separates Georgia from Alabama, and the remaining 20 miles from Florida.
>
> Thence along Orr and Whitner's line, S. 87° 17′ 22″ E. (average direction), 158–28/80 miles, to a point 37 links north of Ellicott's mound, on St. Marys River. This line is marked by a succession of mounds about 10 feet at the base and 5 feet high—a very permanent form of landmark—and separates Georgia from Florida. It continues approximately and on an average as follows:
>
> From Ellicott's mound S. 10° E., about 10 miles; thence east 8 miles; thence north 24 miles; thence east 33 miles, following the St. Marys River in its tortuous windings to the Atlantic Ocean.

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[14] For copies of official documents, Federal and State, relating to this boundary, of dates from 1789 to 1846, see 33d Cong., 2d sess., S. Misc. Doc. 25, 1855, a book of more than 400 pages.

[15] Janes, T. P., op. cit., p. 121; Georgia Code, 1873, p. 7; and Florida Code, 1872.

In 1872 Congress passed an act to confirm the titles to land "between the line run by Georgia, known as the Watson line, and the Orr and Whitner line, lately established as the true boundary between the said States."[16]

The line between Georgia and Alabama was fixed by the act of cession from Georgia to the United States in 1802. (See p. 154.) In 1822–1825 Georgia, desiring to have the line run from the Chattahoochee to the point where it strikes the Tennessee line, appointed commissioners for that purpose and requested the cooperation of Alabama and the United States; the latter, however, took no action.

> It had been ascertained by actual survey in running the random line that the first great bend in the river next above the mouth of the Uchee, from which a right line would run to Nickajack without touching the river, was the Big Shoal or Millers Bend, and this the commissioners on the part of Georgia contended was the bend at which the line should begin.[17]

In this contention the commissioners from Alabama refused to concur; consequently the line was run from Nickajack to Millers Bend by the Georgia commissioners alone.[18] Alabama protested against this line and made repeated efforts to reopen negotiations concerning it, to all of which Georgia steadily refused to accede, until finally, January 24, 1840, the Legislature of Alabama passed the following joint resolution:

> *Resolved*, That the State of Alabama will and do hereby, accept as the true dividing line between this State and that of Georgia, the line which was run and marked out by the commissioners of Georgia in 1826, beginning at what is called Millers Bend, on the Chattahoochee River; thence along said marked line to Nickajack.

The line is described in the Code of Alabama in the following words:[19]

> The boundary line between Alabama and Georgia commences on the west side of the Chattahoochee River at the point where it enters the State of Florida; from thence up the river, along the western branch thereof, to the point on Millers Bend next above the place where the Uchee Creek empties into such river; thence in a direct line to Nickajack.

The description of the western boundary of Georgia follows:[20]

> From Nickajack the line between Georgia and Alabama runs south 9° 30′ east to Millers Bend, on the Chattahoochee River, about 146 miles. Thence down the western bank of the river at high-water mark to its junction with Flint River, at a point now four chains below the actual junction, latitude 30° 42′ 42″, longitude 80° 53′ 15″. The average direction of this line is about south 6° east, and distance about 150 miles direct.

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[16] See U. S. Geol. Survey Bull. 440, p. 170, 1910, for location of two points on this line.

[17] Laws of Georgia, 1826, p. 209.

[18] The original report of the commissioners is said to be filed in the Department of Archives and History of Alabama, at Montgomery.

[19] Alabama Code, 1876, p. 189.

[20] Janes, T. P., op. cit., p. 121.

The United States Supreme Court[21] decreed regarding the river boundary between Georgia and Alabama that

> The boundary line runs up the river on and along its western bank * * * the water line impressed upon the bank above the slope is the line * * * Both bank and bed are to be ascertained by inspection, and the line is where the action of the water has permanently marked itself upon the soil. * * *
>
> We must reject, altogether, the attempt to trace the line by either ordinary low water or low water. These terms are only predicable of those parts of rivers within the ebb and flow of the tides, * * * The permanent fast-land bank is referred to as governing the line. And where the bank is fairly marked by the water, that water level will show at all places where the line is.

FLORIDA

Florida was originally settled by the Spaniards and was held as a Spanish Province for nearly 200 years. In 1763 it was ceded by Spain to Great Britain, which divided it into the two Provinces of East Florida and West Florida, separated by the Apalachicola River. East Florida had the same northern boundary as the present State (fig. 11), and West Florida at first had a northern boundary on the 31st parallel, but in 1764 the Province was extended northward to the parallel through the mouth of Yassous River (now the Yazoo), said to be in latitude 32° 28′.[22] (Geological Survey maps show an old mouth of the Yazoo in latitude 32° 22′.)

The peace treaty concluded in 1782 between the United States and Great Britain specified the 31st parallel as the boundary between the United States and West Florida, but by a separate article provided as follows:[23]

> It is hereby understood and agreed that in case Great Britain, at the conclusion of the present war, shall recover or be put in possession of West Florida, the line of north boundary between the said province and the United States shall be a line drawn from the mouth of the river Yassous, where it unites with the Mississippi, due east to the river Apalachicola.

In 1783 Great Britain retroceded Florida to Spain without a definite settlement of the northern boundary of West Florida, which at once became a matter of dispute between the United States and Spain. Spain claimed the territory as far north as the parallel through the mouth of the Yassous, whereas the United States claimed the 31st parallel as the boundary under the treaties of 1782 and 1783, and on that parallel it was fixed by the treaty with Spain signed October 27, 1795.[24]

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[21] 13 Howard, 381. See also 260 U. S. 628.

[22] Lowry, Robert, and McCardle, W. H., A history of Mississippi, p. 108, Jackson, 1891. Donaldson, Thomas, op. cit., p. 108.

[23] Malloy, W. M., op. cit., vol. 1, p. 584.

[24] Chambers, H. E., West Florida and its relations to the historical cartography of the United States: Johns Hopkins Univ. Studies in Historical and Political Science, May, 1898. See also 13 Howard, 406; Fairbanks, G. R., History of Florida, p. 209, Philadelphia, 1871; Fuller, H. B., The purchase of Florida, Cleveland, 1906.

Not only was the northern boundary of West Florida in dispute, but after the Louisiana purchase of 1803 the United States claimed the entire area east to the Perdido River. (See p. 34.) The act of February 12, 1813,[25] authorized the President to occupy that area and appropriated $20,000 for carrying the act into effect.

Although the Spanish treaty concluded February 22, 1819, was not in full effect until February 22, 1821 (see p. 36), Congress, by act of March 3, 1819,[26] authorized the President to take possession of the Floridas and to establish a temporary government therein.

By an act approved March 30, 1822,[27] the territory east of the Mississippi River ceded to the United States by Spain was made the Territory of Florida, embracing the same area as the present State. On March 3, 1845, Florida was admitted to the Union as an independent State.[28]

For a history of the northern boundary of Florida see Georgia, pages 157–159.

In 1831 Congress passed an act relating to the boundary between Florida and Alabama, from which the following is an extract:[29]

> That the President of the United States be, and he is hereby, authorized to cause to be run and marked the boundary line between the state of Alabama and the territory of Florida, by the surveyors-general of Alabama and Florida, on the thirty-first degree of north latitude.

In 1847 the agreement of commissioners previously appointed by Florida and Alabama was ratified, and the line is described as follows:[30]

> Commencing on the Chattahoochee River near a place known as "Irwin's Mills" and running west to the Perdido, marked throughout by blazes on the trees; and also by mounds of earth thrown up on the line, at distances of 1 mile, more or less, from each other, and commonly known as the "mound line," or "Ellicott's line."

This line was run in 1799 by Andrew Ellicott. It was retraced and re-marked in 1853–54 by B. F. Whitner, jr., and again retraced in 1911, by authority of an act of Congress approved June 25, 1910.[31] The examiner in 1911 reported[32] that

> Many of the mounds erected by Whitner in reestablishing the Ellicott line are in perfect condition and are the best evidence remaining of the original surveys in the vicinity.

The line between the two States is given in general terms in the Florida Code as follows:

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[25] 3 Stat. L. 472.
[26] 3 Stat. L. 523.
[27] 3 Stat. L. 654.
[28] 5 Stat. L. 742.
[29] 4 Stat. L. 479.
[30] Florida acts and resolutions, 3d sess., p. 36, Tallahassee, 1848.
[31] 36 Stat. L. 844.
[32] 61st Cong., 3d sess., H. Doc. 1413, p. 19.

Commencing at the mouth of the Perdido River, from thence up the middle of said river to where it intersects the south boundary line of the State of Alabama and the thirty-first degree of north latitude; then due east to the Chattahoochee River.

ALABAMA

On March 3, 1817, by an act of Congress Alabama Territory was formed from the eastern part of Mississippi Territory with the following boundaries[33] (see fig. 12):

beginning at the point where the line of the thirty-first degree of north latitude intersects the Perdido river; thence east to the western boundary line of the state of Georgia; thence along said line to the southern boundary line of the state of Tennessee; thence west along said boundary line to the Tennessee river;[34] thence up the same to the mouth of Bear creek; thence by a direct line to the northwest corner of Washington county; thence due south to the Gulf of Mexico; thence eastwardly, including all the islands within six leagues of the shore, to the Perdido river; and thence up the same to the beginning.

On December 14, 1819, Alabama was admitted as an independent State, with boundaries as above described.

An act of Congress approved March 2, 1819,[35] made it

the duty of the surveyor of the lands of the United States south of the state of Tennessee, and the surveyor of the public lands in the Alabama territory, to run and cut out the line of demarcation, between the state of Mississippi and the state to be formed of the Alabama territory; and if it should appear to said surveyors, that so much of said line designated in the preceding section, running due south, from the north-west corner of Washington county to the Gulf of Mexico, will encroach on the counties of Wayne, Green, or Jackson, in said state of Mississippi, then the same shall be so altered as to run in a direct line from the north-west corner of Washington county to a point on the Gulf of Mexico, ten miles east of the mouth of the river Pascagola.

In 1820, in accordance with this statute, a trial line was run north from the northwest corner of what was then Washington County, marked by a stump of an oak tree 20 feet tall, to the mouth of Bear Creek on the Tennessee River, from which the true bearing of this part of the boundary was found to be N. 2° 8′ E. The final line was run on that course, and posts were established at each mile, the measured distance being 204 miles 30 chains.

Another party ran a trial line due south to the Gulf, from which it was found[36] that

the experimental line encroached on the Counties of Wayne, Green and Jackson in the State of Mississippi & * * * falls on the Gulf of Mexico six miles, 22 chains & 54 links East of the Mouth of the river or Bay of Pascagola * * * we have determined to alter said line to a point on the Gulf of Mexico three miles, 57 chains & 46 links East of the experimental line, * * * which will be ten miles east of the mouth of the river or Bay of Pascagola, and there fix permanently the termination of the boundary line between the States of Mississippi & Alabama.

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[33] 3 Stat. L. 371.

[34] The western crossing of the Tennessee River is intended.

[35] 3 Stat. L. 490.

[36] Manuscript dated May 29, 1820, signed by John Coffee and Thomas Freeman, U. S. surveyors; reports and plats are on file in the General Land Office, division L.

The final line was run and marked as above described for a distance of a little more than 102 miles, and a terminal mound was established about 3 miles from the Gulf, further progress being prevented by swamps. The entire line was cleared, all near-by trees were blazed, posts were set at each mile, and at important points mounds of earth 12 feet at the base and 5 feet high were erected.

The boundary between Alabama and Mississippi is described as follows:[37]

> [Beginning at] a point on the west bank of the Tennessee river, six four-pole chains south of and above the mouth of Yellow creek; thence up the said river to the mouth of Bear creek; thence by a direct line to what was formerly the northwest corner of the county of Washington, (Ala.); thence in a direct line to a point ten miles east of the Pascagoula river, on the Gulf of Mexico:

The boundary between Alabama and Tennessee is by statute the 35th parallel of north latitude (see North Carolina, p. 147); from Nickajack (see Georgia, p. 159) the line runs[38]

> west along the southern boundary line of the state of Tennessee crossing the Tennessee river, and on to second intersection of said river by said line.

In October, 1807, Thomas Freeman made sextant observations for latitude a short distance east of the Elk River, near longitude 87°. He marked a point which he estimated was on the 35th parallel, the north boundary of the area then called the Mississippi Territory, and ran the line between the Elk River and the old Cherokee line, a distance of about 30 miles. In 1817 the line was extended westward to the Tennessee River, a measured distance of a little more than 71½ miles. Between 1822 and 1839 this boundary line was run eastward as far as the northwest corner of Georgia. The notes of these surveys are in the Alabama field notebooks of the General Land Office.

For the history of the boundary between Alabama and Georgia see Georgia, pages 159–160, and for the history of the boundary between Alabama and Florida see Florida, pages 161–162.

The northeast corner of Alabama, as now marked, is more than a mile south of the 35th parallel. The north boundary crosses the 35th parallel near longitude 87° 20′, and at the northwest corner of the State it is about half a mile north of its proper position as defined by statute. The latitude and longitude of a number of points on the western part of the north boundary are given in United States Geological Survey Bulletins 216, 276. 440, and 551.

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[37] Whitefield, A. H., Catchings, T. C., and Hardy, W. H., The Mississippi code of 1906, p. 244.

[38] Keys, Wade, and Wood, F. M., Code of Alabama, p. 189, Montgomery, 1877.

MISSISSIPPI

By an act approved April 7, 1798,[39] Congress authorized the establishment of Mississippi Territory, the boundaries of which were thus described:

> All that tract of country bounded on the west by the Mississippi, on the north by a line to be drawn due east from the mouth of the Yasous [now called the Yazoo] to the Chatahouchee; on the east by the Chatahouchee; and on the south by the thirty-first degree of north latitude.

But as jurisdiction over this area was claimed by Georgia, the act provided for the appointment of commissioners to determine and adjust Georgia's claims, which were "declared to be as firm and available as if this act had never been made."

Georgia ceded its rights in this area to the United States in 1802. (See p. 154.) South Carolina having also ceded to the United States its claims to territory west of its present limits, the General Government in 1804, by an act of Congress, annexed to the Mississippi Territory the tract of country lying north of the Territory and south of the State of Tennessee and bounded on the east by Georgia and west by Louisiana.[40]

In 1812 the United States added to Mississippi Territory all the lands lying east of the Pearl River, west of the Perdido, and south of the 31st degree of latitude.[41] The United States claimed this area as part of the Louisiana Purchase but had acquiesced in its temporary occupancy by Spain. By proclamation dated October 27, 1810, the President declared that possession should be taken on behalf of the United States and directed the Governor of Orleans Territory to assume control of it.[42]

By these additions the Mississippi Territory was made to comprise what is now included in the States of Alabama and Mississippi.

On December 10, 1817, the western part of the Mississippi Territory was made a State and admitted into the Union,[43] with boundaries (see fig. 12) given in the enabling act of March 1, 1817, as follows:[44]

> Beginning on the river Mississippi at the point where the southern boundary of the state of Tennessee strikes the same, thence east along the said boundary line to the Tennessee river, thence up the same to the mouth of Bear Creek,

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[39] 1 Stat. L. 549.

[40] 2 Stat. L. 305.

[41] 2 Stat. L. 734.

[42] Thorpe, F. N., op. cit., vol. 3, p. 1375.

[43] 3 Stat. L. 472.

[44] 3 Stat. L. 348. There is a historical description of the Mississippi boundary line in the Revised Code of the statute laws of Mississippi, pp. 47–49, Jackson, 1857.

thence by a direct line to the northwest corner of the county of Washington, thence due south to the Gulf of Mexico, thence westwardly, including all the islands within six leagues of the shore, to the most eastern junction of Pearl river with Lake Borgne, thence up said river to the thirty-first degree of north latitude; thence west along said degree of latitude to the Mississippi river; thence up the same to the beginning.

For further information concerning the eastern boundary see Alabama, page 162.

In 1819 the line between Mississippi and Tennessee was run by commissioners. In 1833 the Legislature of Tennessee passed an act[45] defining the south boundary as the line run in 1830 by John Thompson, commissioner acting for Tennessee, but Mississippi refused to accept the line as thus marked.[46] In 1837 the line was again run by commissioners from the two States and ratified by the legislatures. The commissioners' report was as follows:[47]

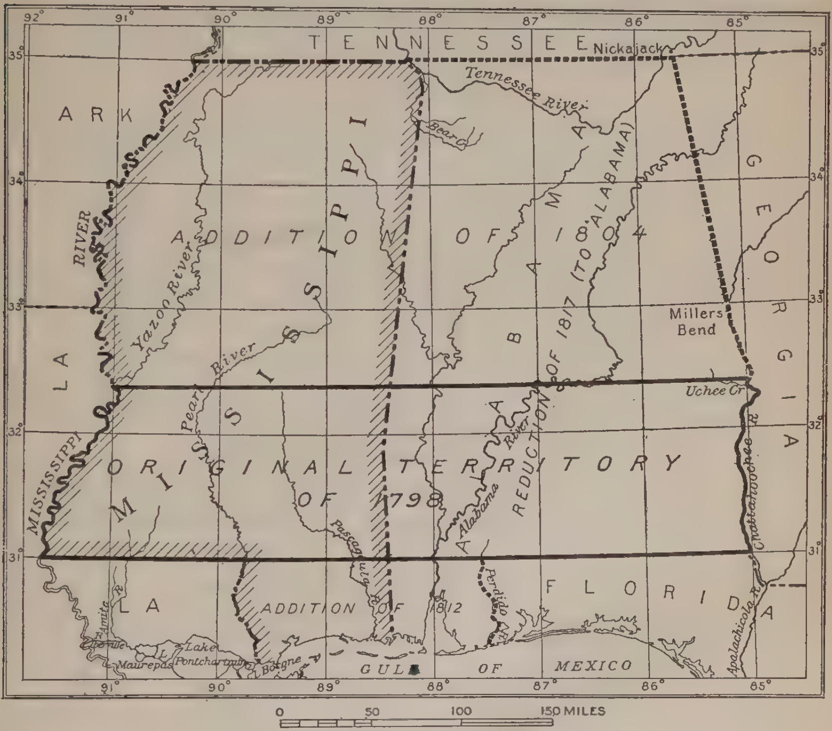
92°
91°
90°
89°
88°
87°
86°
85°
35°
34°
33°
32°
31°
TENNESSEE
Nickajack
Tennessee River
ARK
Bear
MISSISSIPPI
ADDITION OF 1804
(TO ALABAMA)
ALABAMA
GEORGIA
RIVER
MISSISSIPPI
Yazoo River
Pearl River
LA
Millers Bend
Uchee Cr
ORIGINAL TERRITORY OF 1798
OF 1817
REDUCTION
Alabama R
Pascagoula R
Chattahoochee R
Amite R
LA
ADDITION OF 1812
FLORIDA
Perdido R
Apalachicola R
Iberville
Lake Maurepas
L. Pontchartrain
L. Borgne
GULF OF MEXICO
0
50
100
150 MILES

FIGURE 12.—Historical diagram of Mississippi

Commencing at a point on the west bank of the Tennessee river six four-pole chains south, or above the mouth of Yellow Creek, and about three-quarters of a mile north of the line known as "Thompson's line," and twenty-six chains and ten links north of Thompson's line at the basis meridian of the Chickasaw surveys, and terminating at a point on the east bank of the Mississippi river (opposite Cow Island) sixteen chains north of Thompson's line.

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[45] Laws of Tennessee for 1833, p. 52.

[46] See Laws of Tennessee for 1833, p. 122, and Resolution No. 9, for reference to the Walker line.

[47] Tennessee Laws, p. 27, 1837.

By joint resolutions approved January 26, 1909,[48] Congress authorized the States of Mississippi and Louisiana and Mississippi and Arkansas to fix the river boundary lines between them and to cede the one to the other any tracts of land that had been separated from the main body of either State by changes in the channel of Mississippi River.[49]

In the Mississippi State code the river boundary is described as "the Mississippi River (meaning thereby the center of said river or thread of stream)."

LOUISIANA

The original territory of Louisiana was acquired from France. (See pp. 27–34 and fig. 2.) In 1804 a portion of this territory comprising part of the present State of Louisiana and the area south of latitude 31° eastward to the Perdido, claimed by the United States as a part of the Louisiana Purchase, was organized into a Territory under the name of Orleans, and the rest of the Louisiana Purchase was named the district of Louisiana.[50] This name was changed to the Territory of Louisiana by act of March 3, 1805.[51] By act of Congress of April 8, 1812,[52] effective April 30, the Territory of Orleans, except the area north and east of Lake Pontchartrain, which was added by a later act, was admitted as a State under the name of Louisiana, and by the act of June 4, 1812, the name of the Territory of Louisiana was changed to Missouri Territory. (See fig. 18.) In the same year the limits of the State were enlarged on the southeast to their present extent.[53] The United States claim to the area between the Sabine and the Mississippi was not recognized by Spain until 1819. (See p. 36.)

The act approved March 26, 1804,[54] defines the Territory of Orleans as

> all that portion of country, ceded by France to the United States under the name of Louisiana, which lies south of the Mississippi territory, and of an east and west line to commence on the Mississippi river, at the thirty-third degree of north latitude, and to extend west to the western boundary of the said cession, shall constitute a Territory of the United States, under the name of the territory of Orleans.

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[48] 35 Stat. L. 1160, 1161.

[49] Similar authority was granted to Missouri and Kansas and to Oregon and Washington in 1910 (36 Stat. L. 881). See also 211 U. S. 127 and 214 U. S. 217.

[50] 2 Stat. L. 283.

[51] 2 Stat. L. 331.

[52] 2 Stat. L. 702.

[53] 2 Stat. L. 708.

[54] 2 Stat. L. 283.

The following clause from the act admitting Louisiana as a State defines its original boundaries:

beginning at the mouth of the river Sabine; thence by a line to be drawn along the middle of said river, including all islands, to the thiry-second degree of latitude; thence due north, to the northernmost part of the thirty-third degree of north latitude; thence along the said parallel of latitude to the river Mississippi; thence down the said river to the river Iberville, and from thence along the middle of the said river and lakes Maurepas and Pontchartrain to the Gulf of Mexico; thence, bounded by the said gulf, to the place of beginning, including all islands within three leagues of the coast.

The Iberville River is now known as Bayou Manchac. (See p. 28.)

An act approved April 14, 1812,[55] made the following addition to the State of Louisiana:

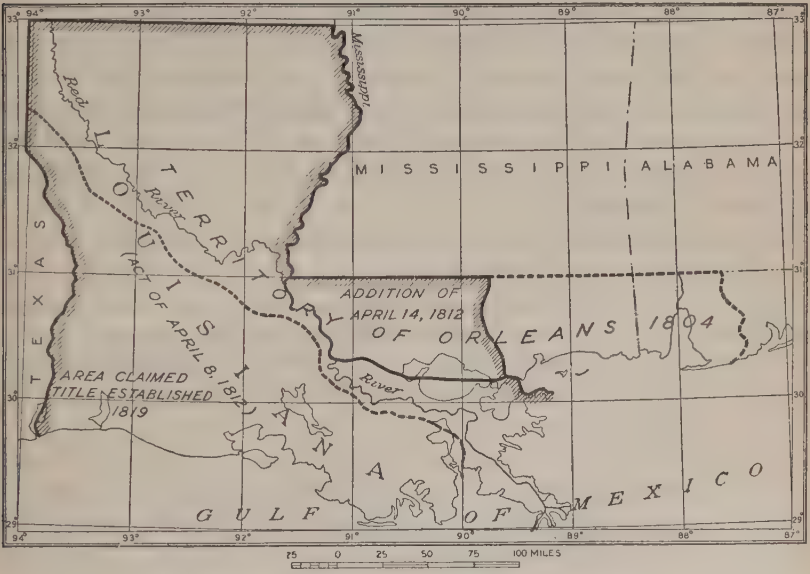
94°
93°
92°
91°
90°
89°
88°
87°
33
32
31
30
29
Red
Mississippi
LOUISIANA
TERRITORY
River
(ACT OF APRIL 8, 1812)
MISSISSIPPI
ALABAMA
TEXAS
ADDITION OF APRIL 14, 1812
OF ORLEANS
1804
AREA CLAIMED TITLE ESTABLISHED 1819
River
GULF OF MEXICO
25 0 25 50 75 100 MILES

FIGURE 13.—Historical diagram of Louisiana

Beginning at the junction of the Iberville with the river Mississippi, thence along the middle of the Iberville, the river Amite, and of the lakes Maurepas and Pontchartrain, to the eastern mouth of the Pearl River; thence up the eastern branch of Pearl River to the thirty-first degree of north latitude; thence along the said degree of latitude to the river Mississippi; thence down the said river to the place of beginning, shall become and form a part of the State of Louisiana.

This change in the boundary, whereby an area of more than 5,000 square miles was added to the State, required acceptance by the legislature before it became effective. (See fig. 13.)

The question has often been asked why the State boundary as fixed by the act of April 8, 1812, was not made to include the area added a few days later. When the enabling act of February 20, 1811, was under consideration, it was proposed to include in the new State all or part of West Florida as described in the treaty of 1763 between Spain and Great Britain, but because of numerous objections this area was purposely omitted. The matter was brought up in the constitutional convention of January, 1812, when it was again proposed to include the West Florida area east to the Perdido River, but the proposition was voted down, presumably because the enlarged area would include too many Anglo-American inhabitants, the objectors being largely among the Creoles of Louisiana.[56]

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[55] 2 Stat. L. 708.

A few days later, however, the convention sent a memorial to Congress asking that the West Florida area, west of the Pearl River, be at once made a part of the proposed State. This request was refused, as it was deemed best to provide for the change in a separate bill. The principal reasons for this action were that it gave the people of the new State an opportunity for accepting or refusing the addition as they saw fit, and although the United States was in actual possession of the area, the title was in dispute and according to the presidential proclamation of October 27, 1810, was subject to "amicable negotiation."[57]

The water boundary between Mississippi and Louisiana south of the Pearl River is thus described:[58]

> the deep water channel sailing line emerging from the most eastern mouth of Pearl River into Lake Borgne and extending through the northeast corner of Lake Borgne, north of Half Moon or Grand Island, thence east and south through Mississippi Sound, through South Pass between Cat Island and Isle a Pitre, to the Gulf of Mexico, * * *

The north boundary of the Territory of Orleans (now the State of Louisiana) was surveyed in 1806, presumably along the 33d parallel, from the west bank of the Mississippi River to the east bank of the Red River, a reported distance of 147 miles 49 chains. Most of the marks were blazed trees. This location of the line was accepted in 1841 as the State boundary. From mile 101 to the Red River this line was resurveyed and re-marked in 1841. Other parts of the line have been resurveyed as part of the regular work of the General Land Office. West of the Red River the line was surveyed in 1839. The western 6 miles was resurveyed in 1895, and a stone post 48 inches long and 10 inches square was placed on the Texas line to mark the northwest corner of the State.

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[56] See Cox, I. J., The West Florida controversy, 1798–1813, p. 604. Baltimore, 1918. See also pp. 548, 599, and 601.

[57] For references to Congressional debates on this subject see Annals of Congress, 11th Cong., 3d sess., p. 486, 1853; 12th Cong., 1st sess., vol. 1, pp. 186–194, 1159; vol. 2, pp. 1185–1216, 1853.

[58] 202 U. S. 58. See also 202 U. S. 1.

The Geological Survey has located points on this line as follows: Near east end of line, latitude 33° 00′ 16.5″, longitude 91° 13′ 21.2″; near Arkana, latitude 33° 01′ 11.0″, longitude 93° 40′ 24.7″; 1⅕ miles east of the northwest corner of the State, latitude 33° 01′ 09.7″, longitude 94° 01′ 18.6″. For reference to the survey of the west boundary, see Texas, below.

TEXAS

Texas declared its independence of Mexico in 1835. In 1836 the Congress of the Republic of Texas defined the boundaries as extending south and west to the Rio Grande and northward from the source of that river to the 42d parallel, the eastern and northern limits coinciding with the western boundary of the United States as laid down in the treaty with Spain in 1819. This area comprised all of the former Mexican States of Coahuila and Texas. The boundary as fixed by the treaty of 1819 was reaffirmed by treaty with Mexico concluded January 12, 1828, Mexico having in the meantime gained its independence from Spain. These boundaries were formally recognized by the United States act of September 9, 1850.[59] (See p. 67 and fig. 14.)

Article 3 of the Mexican treaty of 1828 provided for the appointment of commissioners to survey and mark the land part of the boundary from the mouth of the Sabine River to the Arkansas River, to determine the latitude and longitude of the source of the Arkansas, and to mark the line of the 42d parallel to the South Sea, but no commission was appointed under that treaty, and the line was not marked north of the Red River.

The accession of Texas restored to United States jurisdiction an area of about 96,000 square miles formerly a part of the Louisiana Purchase but transferred to Spain by the treaty of 1819. The eastern boundary of the Republic of Texas, which followed the west bank of the Sabine River, was surveyed in 1840 by a joint commission representing the United States and Texas from the Gulf to Logans Ferry, the observed latitude of which was found to be 31° 58′ 24″ and the longitude 94° 00′ 02.4″. The initial mark of this survey was a mound of earth 50 feet in diameter and about 7 feet high on the shore of the Gulf, the position of which was reported as latitude 29° 41′ 27.5″, longitude 93° 50′ 14.2″.[60]

In the following year another commission ran the line northward along the Sabine River to the 32d parallel as determined from astronomic observations, thence along a true north line to the south bank of the Red River. Mounds were erected at 1-mile intervals on the meridian boundary, the measured length of which was found to be a little less than 106½ miles. The original plats of this survey are on file in the United States State Department, and the General Land Office has copies. The field notes were probably filed in the War Department.[61] The approximate longitude of the meridian line at latitude 33° 06′ 30″ is 94° 02′ 35.1″.

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[59] 9 Stat. L. 447. See Spillman, W. J., Adjustment of the Texas boundary of 1850: Texas Hist. Assoc. Quart., October, 1902, and January, 1904.

[60] For other data relating to this line see Marshall, T. M., A history of the western boundary of the Louisiana Purchase, ch. 12, Berkeley, Univ. California Press, 1914.

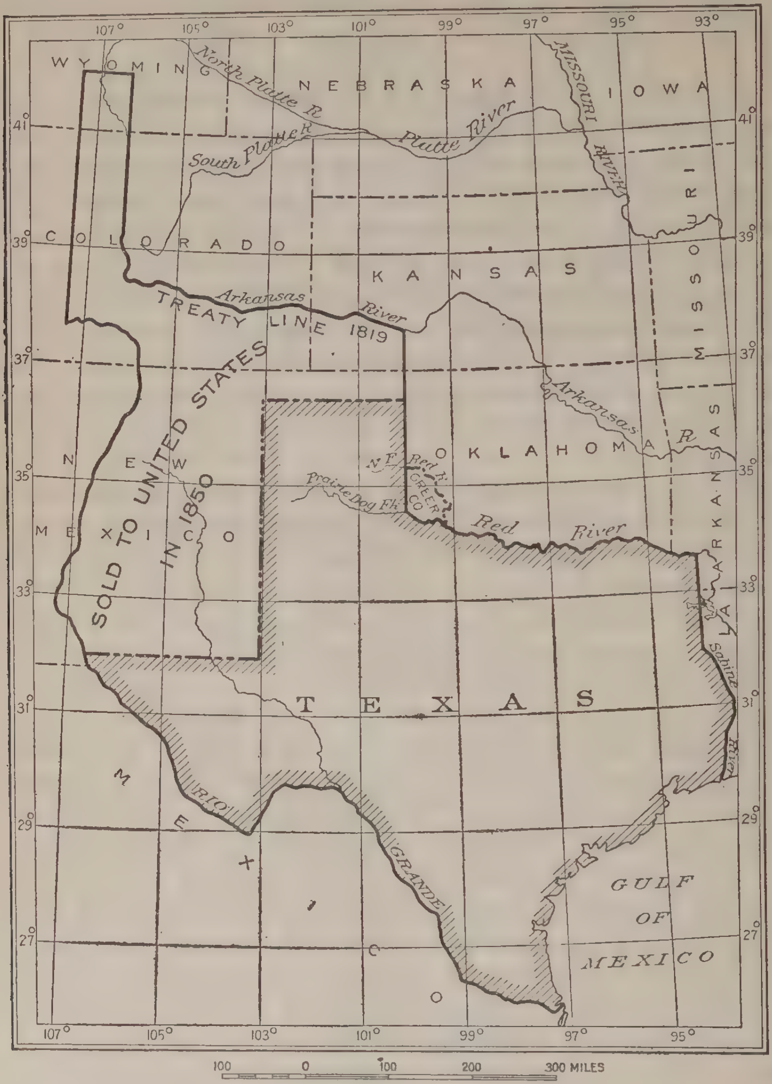
107°
105°
103°
101°
99°
97°
95°
93°
41°
39°
37°
35°
33°
31°
29°
27°
WYOMING
NEBRASKA
IOWA
North Platte R.
South Platte R.
Platte River
MISSOURI RIVER
COLORADO
KANSAS
MISSOURI
Arkansas River
TREATY LINE 1819
SOLD TO UNITED STATES IN 1850
NEW MEXICO
OKLAHOMA
Arkansas R.
N.F. Red R.
GREER CO.
Prairie Dog Fk.
Red River
ARKANSAS
LA.
Sabine River
TEXAS
MEXICO
RIO GRANDE
GULF OF MEXICO
100
0
100
200
300 MILES

FIGURE 14.—Historical diagram of Texas

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[61] The journal of the commission and some excellent maps of the survey were published in S. Doc. 199, 27th Cong., 2d sess., 1842.

In a joint resolution approved March 1, 1845, Congress gave its consent for the erection of Texas into a State, provided certain conditions and "guarantees" were accepted, one of which was as follows:[62]

> New States, of convenient size, not exceeding four in number, in addition to said State of Texas, and having sufficient population, may hereafter, by the consent of said State, be formed out of the territory thereof, which shall be entitled to admission under the provisions of the Federal constitution.

Texas does not appear, however, to have acquired by this proviso any advantages over other States, as it merely can give its "consent" to a division of its area, the right to make the recommendation or request for the division apparently resting with Congress.[62a]

On December 29, 1845, Texas was admitted as a State.[63]

In 1848 the eastern boundary of the State was extended slightly, as noted in the following extract:[64]

> That this Congress consents that the legislature of the State of Texas may extend her eastern boundary so as to include within her limits one-half of Sabine Pass, one-half of Sabine Lake, also one-half of Sabine River, from its mouth as far north as the thirty-second degree of north latitude.

In 1850 the State sold to the General Government for the sum of $10,000,000, payable in stock bearing 5 per cent interest for 14 years, that part lying north of the parallel of 36° 30′ from longitude 100° west of Greenwich to longitude 103° and west of longitude 103° as far south as the parallel of 32°.[65]

The northern boundary of Texas from the 100th meridian westward is thus described in an act of Congress of June 5, 1858, authorizing the marking of the boundary lines between the territories of the United States and the State of Texas:[66]

> Beginning at the point where the one hundredth degree of longitude west from Greenwich[67] crosses Red River, and running thence north to the point where said one hundredth degree of longitude intersects the parallel of thirty-six degrees thirty minutes north latitude; and thence west with the said parallel of thirty-six degrees and thirty minutes north latitude to the point where it intersects the one hundred and third degree of longitude west from Greenwich; and thence south with the said one hundred and third degree of longitude to the thirty-second parallel of north latitude; and thence west with said thirty-second degree of north latitude to the Rio Grande.

For more than 50 years the title to an area of about 2,380 square miles was in dispute between the State of Texas and the United

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[62] 5 Stat. L. 797.

[62a] See speech by Representative Garner relating to this proposal (Cong. Record, June 17, 1930, p. 11459).

[63] 9 Stat. L. 108.

[64] 9 Stat. L. 245.

[65] 9 Stat. L. 446. See also 9 Stat. L. 1005.

[66] 11 Stat. L. 310.

[67] See footnote 2, p. 36, for reference to 100th meridian west of London.

States. This area, formerly known as Greer County, is east of the 100th meridian and between the two main forks of the Red River, which branch in approximately 99° 12′ west longitude. (See fig. 21.) Texas claimed that the North Fork of the Red River is the main stream and the one referred to in the description of the boundary in the Spanish treaty of 1819, and the United States claimed the South Fork as the proper location of the boundary. After years of litigation the Supreme Court on March 16, 1896, decided[68] that

> the territory east of the 100th meridian of longitude, west and south of the river now known as the North Fork of Red River, and north of a line following westward, as prescribed by the treaty of 1819 between the United States and Spain, the course, and along the south bank, both of Red River and of the river now known as the Prairie Dog Town Fork or South Fork of Red River until such line meets the 100th meridian of longitude—which territory is sometimes called Greer County—constitutes no part of the territory properly included within or rightfully belonging to Texas at the time of the admission of that State into the Union, and is not within the limits nor under the jurisdiction of the State, but is subject to the exclusive jurisdiction of the United States of America.

The Supreme Court records of this case, which cover more than 1,000 printed pages, are summarized in the decree of 36 pages. These documents contain much historical matter relating to the northern and eastern boundary of Texas, also copies of a number of old maps, etc.[69]

One clause of the decree places the boundary line on the south bank of the Red River, where it was believed old treaties and other official descriptions of the line intended it should be placed.[70] This boundary had also been in dispute for many years, Texas claiming to the middle of the river. In decisions of the Department of the Interior relating to public lands,[71] there is an opinion rendered on April 29, 1897, by the Assistant Attorney General regarding this boundary as follows:

> I therefore assume that the boundary between the Indian Territory and the State of Texas is the line of the middle of the main channel of Red River as it existed when Texas was annexed to the United States, and subsequent sudden changes in the current or main channel of said river will not in any way affect the location or position of said boundary line as it lay upon the earth's surface when established.

In this opinion no reference was made to the decision of the Supreme Court of the previous year in which a contrary opinion was rendered.

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[68] 162 U. S. 90.

[69] See Baker, Marcus, The northwest boundary of Texas: U. S. Geol. Survey Bull. 194, pp. 31–35, 1902. See also Oklahoma, p. 217.

[70] See reference to the "right bank of the Red River" in the act of 1824, defining the south boundary of Arkansas, p. 178.

[71] Land Dec., vol. 24, p. 372.

Briefs in a suit by Oklahoma against Texas were submitted to the United States Supreme Court at its October term, 1920, and the decision, rendered April 11, 1921, reaffirmed the former decision making the south bank of the Red River the boundary, and in a decision rendered January 15, 1923,[72] as to what constituted the south bank it was stated that

> the bank intended by the treaty provision is the water-washed and relatively permanent elevation or acclivity at the outer line of the river bed which separates the bed from the adjacent upland, * * * and that the boundary intended is on and along the bank at the average or mean level attained by the waters in the periods when they reach and wash the bank without overflowing it.

The bed of the stream was defined as including

> all of the area which is kept practically bare of vegetation by the wash of the waters of the river from year to year * * *

and excluding

> the lateral valleys which have the characteristics of relatively fast land and usually are covered by upland grasses and vegetation, although temporarily overflowed in exceptional instances when the river is at flood.

A survey of the boundary, in accordance with this decision, ordered by the court, was completed, and the final report of the commissioners was accepted and confirmed April 25, 1927.[73]

An excellent historical review of this boundary dispute is given by Isaiah Bowman,[74] who states that the Red River case is "the most complicated boundary dispute on record anywhere."

Surveys for the Texas boundary on the 100th meridian west of Greenwich were made in whole or in part under the direction of the General Land Office in 1859, 1860, 1873, 1875, 1902, and 1903, but none of these was accepted as fixing the boundary.

In 1892 the State of Texas employed an astronomer to determine "with the utmost care the location of the 100th meridian [west of Greenwich] at its intersection with Red River." As a result of the work thus authorized it was reported that the initial monument of 1859 was 45.11 seconds of longitude west of the true meridian.[75]

The position of this point was redetermined in 1902 from astronomic observations and reported as 3,699.7 feet (44.24″) west of the 100th meridian. A stone post 10 by 10 by 45 inches in size was placed on the meridian at a point 1,563 feet north of the Red River.[76]

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[72] 260 U. S. 631.

[73] 274 U. S. 714.

[74] Geog. Review, April, 1923, pp. 161–189. A brief review of this boundary dispute and an extensive report (with maps) on the investigations made for fixing the position of the boundary are given in Texas Univ. Bull. 2327, 1923.

[75] U. S. Geol. Survey Bull. 194, pp. 31–35, 1902.

[76] 57th Cong., 2d sess., H. Doc. 33, p. 8, 1902.

The line marked as the 100th meridian boundary was retraced in 1903 by the General Land Office from the Red River north to the assumed position of the parallel of 36° 30′,[77] and at a point computed to be on the true meridian a large concrete pier was erected marked on the southwest face "36° 30′ N. L., 100° W. L., 1903." This pier is 243 feet north and 1,756 feet east from the east end of the Cimarron base line of the General Land Office. In 1881 a large stone was placed at that point and marked as being the northeast corner of Texas.

Neither Congress nor the State of Texas had approved any of the surveys for the 100th meridian; consequently none had any legal status.[78]

In October, 1926, the United States Supreme Court decreed[79] that neither the boundary survey of 1859–60 nor the location of the 100th meridian in 1902–3 could be accepted as establishing the boundary and ordered that a new survey be made.

In order to locate the line with all possible exactness it was decided by the commissioner appointed by the court to place it on the geodetic meridian (North American datum; see p. 5) determined from first-order triangulation by the Coast and Geodetic Survey, and 20 stations were established by that survey on or near its assumed position.

The marking of the boundary line was commenced in 1928 at a point 340.28 feet east from the 1902 mark near the Red River and extended south to a point near the "cut bank" on the south side of the river, where a large reinforced-concrete monument was built, and a reference mark on the meridian was placed at a point 351.2 feet farther south. From the cut-bank mark the line was run due north for a distance of 133.6 miles, checked in position at each of the 20 geodetic stations, and closed on an eastward extension of the 36° 30′ parallel boundary line as determined by Clark in 1860. There are now 160 concrete monuments on the line, each having a lettered metal tablet set in its upper surface. The line as thus established was approved by the United States Supreme Court March 17, 1930.[79a]

The mark set in 1929 for the northeast corner of Texas is in latitude 36° 29′ 59.56″, longitude 100° 00′ 00.00″ west of Greenwich and is 286.5 feet southeast of the mark of 1903. The geodetic line as now marked is 4,040 feet east of the south end of the 1859–60 line and about 880 feet east of the north end of the line as marked in 1859–60 and retraced in 1873. The strip of land included between these two lines has an area of about 44.6 square miles and is thus determined to be in Texas and not in Oklahoma.[80]

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[77] 59th Cong., 1st sess., H. Doc. 259, p. 4, 1905.

[78] Idem, p. 10.

[79] 272 U. S. 21. This decree gives a detailed history of the various surveys for the establishment of the 100th meridian. See also a brief history of the surveys in General Land Office Service Bull., December, 1926, p. 315.

[79a] 281 U. S. 109.

The northern line of the "panhandle" of Texas, which is the southern boundary of the "public-land strip," was fixed by statute at latitude 36° 30′. It was surveyed in 1860 by the General Land Office, and 16 monuments were erected. Monument 10 on this line is in latitude 36° 29′ 59.56″, longitude 101° 05′ 17.00″. This location of the north boundary and the location of the 103d meridian boundary were confirmed by Congress and by the State of Texas in 1891.[81]

The location of the west boundary of Texas, which by statute is the 103d meridian, has been the cause of many disputes. The southern part of the line for about 69 miles and the northern part for about 172 miles were reported as surveyed and marked in 1859 by J. H. Clark, leaving an unmarked gap of about 69 miles. Most of the marks were merely mounds of earth; a few were stones or piles of stone, and some of these were identified many years thereafter. (See pl. 9, *C*.) Later surveys indicate that the north end of the line is in longitude 103° 02′ 28.28″ and latitude 36° 30′ 01.60″ (North American datum). The south end is in longitude 103° 03′ 55.02″ and latitude 31° 59′ 58.52″ (astronomic). There is therefore a discrepancy of about 1½ miles between the two parts of the line, both being west of their proper positions,[82] but these lines as well as that following the 32d parallel, having been accepted by the United States and Texas, are the legal boundary lines.

A joint resolution of Congress February 16, 1911,[83] declared that "these boundary lines as run and marked by John H. Clark in 1859–60 [84] shall remain the true boundary lines of Texas and New Mexico." The lines were described as following the 103d meridian and 32d parallel as "determined by Clark," and commissioners were authorized to act for Texas and the United States to re-mark the north-south line so far as it could be identified, and where no marks were found or where surveys had not been made straight lines were to be run joining recovered points.

In accordance with this act surveys were run south from the known location of the north boundary mark, to the 34th parallel, to which Clark claimed to have run, and north from the identified mark established by Clark for the intersection of the 32d parallel and the 103d meridian, to the 33d parallel. Between the 32d and the 34th parallels a straight line was run which bears N. 1° 00′ 42″ E. Large concrete monuments (pl. 9, *D*, and fig. 23) were established at a number of points, and other substantial marks were placed at each mile.

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[80] For other data relating to this survey see the commissioners' report to the United States Supreme Court dated July 15, 1929.

[81] 26 Stat. L. 948, 971; 59th Cong., 1st sess., H. Doc. 259, pp. 13–18, 1905.

[82] See also Baker, Marcus, op. cit., for map and other data.

[83] 36 Stat. L. 1455.

[84] See report by J. H. Clark, commissioner: 47th Cong., 1st sess., S. Doc. 70, 1882.

The 32d parallel boundary was also rerun in 1911; its length as measured was a little more than 209 miles. The latitude of this line near Clark monument No. 1, east of the Rio Grande, is 32° 00′ 00.37″ as determined from astronomic observations in 1903. At milepost 53 (resurvey of 1911) the geodetic position is latitude 31° 59′ 59.93″, longitude 103° 58′ 02.53″. Milepost 61 is in latitude 31° 59′ 59.40″, longitude 104° 06′ 13.18″. The notes and plats of these surveys are on file in the General Land Office.

The southern boundary of Texas is a part of the international boundary between the United States and Mexico and as defined by the treaty of 1848 and reaffirmed by the treaty of 1853 follows the middle of the deepest channel of the Rio Grande from the Gulf of Mexico to the southern boundary of New Mexico. A survey of this boundary was made in 1852–53. The report was published in 1857. It is generally referred to as the Emory report on the survey of the Mexican boundary.[85]

Resurveys of parts of the boundary where important changes in the position of the river had occurred were provided for by the convention of 1884. The following extracts from the conventions of 1884 and 1905[86] set forth the principles that now govern the location of this boundary.

> The dividing line shall * * * follow the center of the normal channel of the rivers named, notwithstanding any alterations * * * effected by natural causes through the slow and gradual erosion * * * and not by the abandonment of an existing bed and the opening of the new one.
>
> Any other change wrought by the force of the current, * * * shall produce no change in the dividing line as fixed by the surveys of * * * 1852, but the line then fixed shall continue to follow the middle of the original channel bed, even though this should be wholly dry. [Convention of 1884.]

Modifications of the articles of the convention of 1884 were made by the convention of 1905, which authorized the elimination from the effects of the agreements in the earlier convention of numerous changes in the position of the "normal channel" as follows:

> Whereas * * * it has been observed that there is a typical class of changes effected in the bed of the Rio Grande, in which, owing to slow and gradual erosion, coupled with avulsion, said river abandons its old channel and there are separated from it small portions of land known as "bancos" bounded by the said old bed, and which, according to the terms of * * * the Convention of 1884, remain subject to the dominion and jurisdiction of the country from which they have been separated.

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[85] 34th Cong., 1st sess., S. Ex. Doc. 108, vol. 1, 1857.

[86] Malloy, W. M., op. cit., vol. 1, pp. 1159, 1199.

> Whereas said "bancos" are left at a distance from the new river bed, and by reason of the successive deposits of alluvium, the old channel is becoming effaced, the land of said "bancos" becomes confused with the land of the "bancos" contiguous thereto, thus giving rise to difficulties and controversies, * * *
>
> Whereas the labors of the International Boundary Commission, undertaken with the object of fixing the boundary line with reference to the "bancos," have demonstrated that the application to these "bancos" of the principle established in * * * the Convention of 1884 renders difficult the solution of the controversies mentioned, and, instead of simplyfying, complicates the said boundary line between the two countries;

Article 1 refers to maps made from surveys of 58 bancos along the lower Rio Grande which the convention eliminates, those on the right bank of the river passing to Mexico and those on the left bank to the United States.

Article 2 is in part:

> The International Commission shall, in the future, be guided by the principle of elimination of the bancos established in the foregoing articles * * *. There are hereby excepted from this provision the portions of land segregated by the change in the bed of the said rivers having an area of over two hundred and fifty hectares [618 acres, or nearly a square mile], or a population of over two hundred souls, and which shall not be considered as bancos for the purposes of this treaty and shall not be eliminated, the old bed of the river remaining, therefore, the boundary in such cases.

Article 3 required that other bancos be surveyed and that suitable marks be placed in the abandoned river bed.[87]

The present boundary lines of Texas are described as follows: Beginning in the Gulf of Mexico, at the outlet of Sabine Lake, the line passes northward through the middle of Sabine Lake and up the middle of the Sabine River to the point where the river intersects the parallel of 32°; thence north along the meridian of that point of intersection to the point where that meridian intersects the Red River; thence up the south bank of the Red River along the south fork to the 100th meridian west of Greenwich; thence north on that meridian to the parallel of 36° 30′; west on that parallel to the meridian of 103° as marked; thence south along the 103d meridian to the parallel of latitude of 32°; thence west on that parallel to its point of intersection with the Rio Grande; thence down the mid-channel of the Rio Grande to the boundary line between the United States and Mexico; thence following that line (see p. 37) to the Gulf.

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[87] See reports published about 1913 by U. S. Dept. State, in two volumes, which include maps or descriptions of 89 bancos that have been eliminated.

ARKANSAS

Arkansaw[88] Territory was formed by act of March 2, 1819, effective July 4, 1819, from a part of Missouri Territory. (See fig. 15.) The following clause from the act establishing it defines its limits in part:[89]

> all that part of the Territory of Missouri which lies south of a line, beginning on the Mississippi River, at thirty-six degrees, north latitude, running thence west to the river St. François; thence up the same to thirty-six degrees thirty minutes north latitude; and thence west to the western territorial boundary line; shall, for the purposes of a territorial government, constitute a separate territory and be called the Arkansaw Territory.

In 1824 an act was passed by Congress fixing the western boundary of the Territory. This was as follows:[90]

> the western boundary line of the territory of Arkansas shall begin at a point forty miles west of the southwest corner of the State of Missouri and run south to the right bank of the Red River, and thence down the river and with the Mexican boundary to the line of the State of Louisiana.

Four years later, in 1828, an act defined the southern boundary as

> commencing on the right bank of the Mississippi River at latitude thirty-three degrees north, and running due west on that parallel of latitude to where a line running due north from latitude thirty-two degrees north, on the Sabine River, will intersect the same.[91]

The treaty with the Cherokee Indians signed May 6, 1828, contained the following article:[92]

> The western boundary of Arkansas shall be, and the same is, hereby defined, viz: A line shall be run, commencing on Red river, at the point where the Eastern Choctaw line strikes said river, and run due north with said line to the river Arkansas; thence in a direct line to the South West corner of Missouri.

The eastern Choctaw line referred to was fixed by the treaty with the Choctaw Nation of January 20, 1825, as beginning on the Arkansas River "one hundred paces east of Fort Smith, and running thence due south to the Red River." [93]

Arkansas was admitted as a State on June 15, 1836. The enabling act approved on that date describes the boundaries as follows:[94]

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[88] This is the original spelling. A concurrent resolution passed by the Legislature of Arkansas in April, 1881 (Laws of 1881, pp. 216-217), declared that in the opinion of that body the State name "should be pronounced in three syllables with the final 's' silent, the 'a' in each syllable with the Italian sound and the accent on the first and last syllables." The discussions which led to the passage of this act are given in Arkansas Hist. Assoc. Pubs., vol. 2, pp. 462–477, Fayetteville, Ark., 1908.

[89] 3 Stat. L. 494.

[90] 4 Stat. L. 40.

[91] 4 Stat. L. 276.

[92] Kappler, C. J., Indian affairs laws and treaties: 57th Cong., 1st sess., S. Doc. 452, vol. 2, p. 149, 1903; also 7 Stat. L. 311.

[93] Idem, p. 20.

[94] 5 Stat. L. 50.

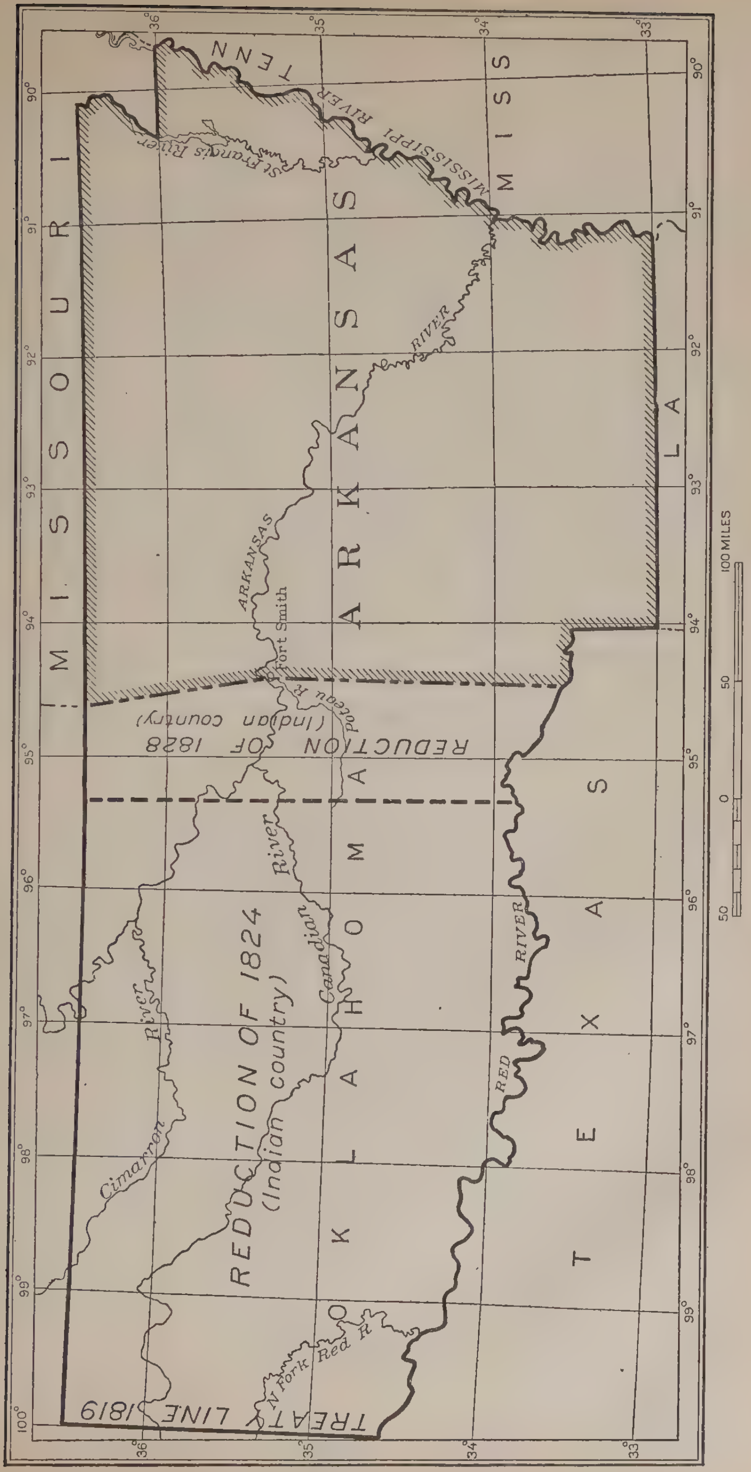
MISSOURI
TENN
MISSISSIPPI RIVER
St Francis River
MISS
ARKANSAS
RIVER
LA
ARKANSAS
Fort Smith
Poteau R
REDUCTION OF 1828
(Indian country)
OKLAHOMA
River
Canadian
REDUCTION OF 1824
(Indian country)
Cimarron
River
RED RIVER
TEXAS
N Fork Red R
TREATY LINE 1819
36°
35°
34°
33°
90°
91°
92°
93°
94°
95°
96°
97°
98°
99°
100°
50
0
50
100 MILES

FIGURE 15.—Historical diagram of Arkansas

beginning in the middle of the main channel of the Mississippi river, on the parallel of thirty-six degrees north latitude, running from thence west, with the said parallel of latitude, to the Saint Francis river; thence up the middle of the main channel of said river to the parallel of thirty-six degrees thirty minutes north; from thence west to the southwest corner of the State of Missouri; and from thence to be bounded on the west, to the north bank of Red River, by the lines described in the first article of the treaty between the United States and the Cherokee nation of Indians, west of the Mississippi, made and concluded at the city of Washington, on the 26th day of May,[95] in the year of our Lord one thousand eight hundred and twenty-eight; and to be bounded on the south side of Red river by the Mexican boundary line, to the northwest corner of the State of Louisiana; thence east with the Louisiana State line, to the middle of the main channel of the Mississippi River; thence up the middle of the main channel of the said river, to the thirty-sixth degree of north latitude, the point of beginning.

In the State constitutions for 1836, 1854, 1868, and 1874 the boundaries were described but without material change from the description given in the enabling act. The constitution of 1868 refers to an island in the Mississippi named Belle Point Island as belonging to Arkansas, and the constitution of 1874 includes this clause: "and all other land originally surveyed and included as a part of the Territory or State of Arkansas."

An act of Congress approved February 10, 1905, changed the western boundary of Arkansas near Fort Smith so as to include in that State a portion of the Indian Territory (about one-fifth of a square mile), the boundaries of which were described as follows[96] (see fig. 21):

Beginning at a point on the south bank of the Arkansas River one hundred paces east of old Fort Smith, where the western boundary line of the State of Arkansas crosses the said river, and running southwesterly along the south bank of the Arkansas River to the mouth of the Poteau; thence at right angles with the Poteau River to the center of the current of said river; thence southerly up the middle of the current of the Poteau River (except where the Arkansas State line intersects the Poteau River) to a point in the middle of the current of the Poteau River opposite the mouth of Mill Creek, and where it is intersected by the middle of the current of Mill Creek; thence up the middle of Mill Creek to the Arkansas State line; thence northerly along the Arkansas State line to the point of beginning.

By order of the United States Supreme Court[97] commissioners in 1920 surveyed and marked a portion of the Arkansas-Mississippi State line, commencing about 1 mile below Friars Point, Miss., on an abandoned bed of the Mississippi River left dry by the avulsion of 1848. The line inclosed an area of about 5 square miles on the east side of the Mississippi as it now flows, which was awarded to Arkansas.[98]

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[95] This is an error; the date was May 6.

[96] 33 Stat. L. 714.

[97] 252 U. S. 344.

[98] 256 U. S. 28.

On March 7, 1876, the Mississippi changed the location of its main channel at a place about 20 miles up the river from Memphis, since known as "the Centennial Cut-off." The Mississippi, before this cut-off occurred, flowed northeastward along the west side of Brandywine Island, Ark. At the time of the avulsion the whole volume of the river with a head of 7 or 8 feet cut through a narrow neck of land, overcame the current flowing northeastward, and swept it backward for about 4 miles, thus reversing the direction of flow and forming a new main channel. An area of about 5 square miles of Arkansas land was left on the east side of the river, and 25 square miles of land belonging to Tennessee on the west side. In order to determine the proper location of the boundary between the two States at this place, Arkansas brought suit in the United States Supreme Court against Tennessee, which was argued in the October term, 1917. The report of this case [99] gives a great many references to court decisions regarding water boundaries in general. Three commissioners were appointed in 1918 [1] to survey the line. Their report, filed May 24, 1921, was confirmed by the United States Supreme Court November 16, 1925.[2]

The north boundary of Arkansas was surveyed in 1823 and resurveyed by a joint commission of Arkansas and Missouri between 1843 and 1846, commencing at a point near the Mississippi whose latitude from sextant observation was determined as 36°. The marks consisted of tree blazes, wooden posts, and mounds of earth and stone. The 1843 line, which differed materially from that previously marked, was accepted by the legislatures and ratified by congressional act of February 15, 1848.[3] Copies of the field notes of both lines are in the General Land Office records.[4]

The part of the west boundary south of the Arkansas River was surveyed and marked in 1825, and that from Old Fort Smith to the southwest corner of Missouri in 1831.

A resurvey of the west boundary was commenced in 1857, but after the surveyors had run it 8 miles due south from the Arkansas River they were directed to return to Fort Smith and to retrace the line of the previous survey, which had been found to diverge to the west.[5]

A resurvey and re-marking of the entire west boundary was authorized in 1875.[6] This work, which was completed in 1877, showed that the lines from Old Fort Smith both southward and northward diverged to the west, thereby adding to the area of

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[99] 246 U. S. 158.

[1] 247 U. S. 461.

[2] See 269 U. S. 152 and 271 U. S. 629.

[3] 9 Stat. L. 211.

[4] Missouri, vols. 362 and 363.

[5] 40th Cong., 2d sess., H. Ex. Doc. 133.

[6] 18 Stat. L. 476.

Arkansas more than 200 square miles, the boundary mark on the Red River being 4 miles 16 chains west of a due south line from Old Fort Smith.[7] The Cherokee and Choctaw Indians were paid for the land of which they had thus been wrongfully deprived.[8]

TENNESSEE

Tennessee was originally a part of North Carolina. In 1784 the Legislature of North Carolina passed an act of cession to the United States of its western counties, and although the act was soon afterward repealed the people of Greene, Sullivan, and Washington Counties (now eastern Tennessee), believing themselves to be without proper government and inadequately defended against the Indians, revolted in 1785 and proceeded to organize an independent State to be called Frankland. A constitution was adopted, and a governor and a legislature were elected. It was planned to invite the inhabitants of adjoining areas now forming parts of Virginia, West Virginia, Ohio, Kentucky, Tennessee, and Alabama to join the movement and thus create a large State, but the continued opposition of North Carolina finally prevailed, and in 1788 North Carolina again gained control.[9]

North Carolina in 1790 again passed an act ceding her western lands to the United States. The cession was accepted by act of Congress approved on April 2 of that year, and a government was provided for in "An act for the government of the territory of the United States south of the Ohio River." [10] The boundaries described in the act of cession are substantially those of the State of Tennessee at the present day.[11] (See fig. 10.)

Tennessee was admitted to the Union as a State by act approved June 1, 1796. The act of admission defined it as "the whole of the territory ceded to the United States by the State of North Carolina." [12]

For the history of the eastern boundary, see North Carolina, page 149; for the southern boundary, see Georgia, page 156; Alabama, page 163; and Mississippi, page 165.

The middle of the Mississippi River became the western boundary of this area by the treaty of peace of 1783.

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[7] 45th Cong., 3d sess., S. Rept. 714.

[8] Arkansas Hist. Assoc. Pubs., vol. 2, pp. 211–236.

[9] See Haywood, John, The civil and political history of the State of Tennessee, pp. 142–175, Knoxville, 1823; and Am. Hist. Rev., vol. 8, pp. 271–293, 1903.

[10] 1 Stat. L. 123.

[11] There are excellent historical descriptions of the Kentucky boundaries in Carroll, J. D., General statutes of Kentucky, 3d ed., pp. 240–243, Louisville, 1903; in Staunton, R. H., Revised statutes of Kentucky, vol. 1, pp. 211–220, Cincinnati, 1860; and in Shannon, R. T., A compilation of the Tennessee statutes, vol. 1, pp. 33–62, Nashville, 1917.

[12] 1 Stat. L. 491.

Virginia and North Carolina, prior to the creation of the States of Kentucky and Tennessee, appointed commissioners—Messrs. Walker and Henderson—to run and mark their common boundary on the parallel of latitude 36° 30′. From a point on the top of the Cumberland Mountains, now the southeast corner of Kentucky, Walker ran and marked the line to a point on the Tennessee River. This line, called Walker's line, was regarded for many years as the dividing line between Kentucky and Tennessee. It has since been ascertained, however, that Walker's line was about 3′ north of latitude 36° 30′.

The Indian title to the land west of the Tennessee River being extinguished by the treaty of 1819, the Legislature of Kentucky appointed Robert Alexander and Luke Munsell to ascertain the true point of latitude 36° 30′ on the Mississippi and to run and mark a line east on that parallel, which was done as far east as the Tennessee.[13]

In 1820 commissioners were appointed by Kentucky and Tennessee to settle the boundary. Their report, ratified by the States and approved by Congress May 12, 1820, is in part as follows:[14]

> The line of boundary and separation between the States of Kentucky and Tennessee shall be as follows, to wit: The line run by the Virginia commissioners, in the years 1779 and 1780, commonly called Walker's line, as the same is reputed, understood, and acted upon by the said States, their respective officers and citizens, from the southeastern corner of Kentucky to the Tennessee river; thence with and up said river to the point where the line of Alexander and Munsell, run by them in the last year under the authority of an act of the legislature of Kentucky entitled an act to run the boundary line between this state and the state of Tennessee, west of the Tennessee river, approved February the 8th, 1819, would cross said river; and thence with the said line of Alexander and Munsell to the termination thereof on the Mississippi river, below New Madrid.

In 1858–59 commissioners were appointed by Kentucky and Tennessee to rerun this line. The report of the commission on the part of Tennessee, giving courses, bearings, and milestones erected can be found in the State statutes.[15] The report of the commission on the part of Kentucky, with latitudes and a map of the line, was printed at Frankfort by the State printer, in 1860, as a pamphlet of 98 octavo pages. Between Cumberland Gap and the Tennessee River the line is from 5¾ to 12 miles north of latitude 36° 30′. As a result of this and other errors in the location of its boundaries Tennessee gained about 2,500 square miles of territory that it would not have had if the lines had been correctly located.

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[13] Carroll, J. D., op. cit., pp. 240–243.

[14] Haywood, John, op. cit., p. 485; see also Carroll, J. D., op. cit., p. 240, and 3 Stat. L. 609. For reference to the 1826 survey of this line by Thomas J. Matthews see Tennessee Hist. Soc. Mag., October, 1920, pp. 177–184.

[15] The compilation of statutes of Tennessee, by S. D. Thompson and T. M. Steger, vol. 1, pp. 223–243, St. Louis, 1873, contains descriptions of all Tennessee boundaries.

The line was run from the Mississippi eastward to the Tennessee, thence down that river to a point in approximate latitude 36° 40′ 45″, and thence eastward, following the old Walker line wherever it could be identified, and where no marks were known it was run to points where the Walker line was reputed to be. At the southwest corner of Virginia is an offset from the Walker line, which had been adopted for the Kentucky boundary, to the compromise line agreed on by Virginia and Tennessee in 1803. The line was continued to the northeast corner of the State and thence about 1½ miles southwest to the North Carolina line, a total distance of about 432 miles.

There are many angles and offsets in the line east of the Tennessee River that can scarcely be attributed to errors in surveying. It seems, however, that the commissioners who first ran the line between Virginia and North Carolina (the Byrd line) and the Tennessee north boundary (the Walker line) were allowed to change the lines at their discretion provided the commissioners for both States agreed; consequently they ran the line on an irregular course to accommodate influential inhabitants along the boundary who desired to remain in one State or the other.[16]

By act of January 28, 1901, Tennessee ceded the north half of the main street in the old town of Bristol to Virginia. This cession was accepted by Virginia February 9, 1901, and approved by Congress March 3, 1901.[17]

For a history of the boundary between Virginia and Tennessee see Virginia, page 143.

An excellent article by Park Marshall on the boundary lines of Tennessee has been published by the State Geological Survey.[18]

Geographic positions on the Tennessee-Virginia boundary have been determined by the United States Coast and Geodetic Survey as follows:[19]

A stone post 24 inches long, set 20 inches in the ground, on Holston Mountain a short distance northwest of Sutherland, at latitude 36° 36′ 51.2″ and longitude 81° 49′ 36.3″. This station is very near the State line if not on it. The observer who located it stated:

> The sketch submitted with the report of the commissioners who ran out the State line in 1858 shows an offset of about 1¾ miles between Bristol and this station. The tree marks are found on the straight line east of the offset point but are said not to be continuous; and blocks have been cut from some

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[16] For a comprehensive history of this line see Garrett, W. R., Northern boundary of Tennessee, a paper read before the Tennessee Historical Society, Mar. 18, 1884, Nashville, 1884.

[17] 31 Stat. L. 1465. See 190 U. S. 75 for reference to this cession.

[18] The resources of Tennessee, vol. 7, pp. 90–108, Nashville, 1918.

[19] See 190 U. S. 64 for report of commissioners who resurveyed this line in 1902–3.

trees showing the age of 1802 or 1803 and have been crossed out. The only line marked through is that with this offset. Blocks with these erased marks can be had in Bristol, in the possession of Mr. Huffacre [1894].

I have found a stone post on this line in the valley of Beaver Dam Creek, about 1½ miles above the village of Damascus and about 2 miles east of this station. I traced the line from this stone west to the highest point it crosses on Holston Mountain, where the station is established, and found several trees marked by both commissioners (1802, or 1803, and 1858) easily recognized at this date. The line of 1802 or 1803 is called the "diamond line," from the method of marking always thus ⁙, while the marks of 1858 are always ∵

In Bristol, Tenn.-Va., latitude 36° 35′ 41.6″, longitude 82° 10′ 41.6″, the State line passes 15 feet south of the Baptist Church steeple.

On a ridge about 5 miles west of Bristol, latitude 36° 35′ 42.1″, longitude 82° 15′ 54.5″.

About 3 miles north of Kingsport, Tenn., latitude 36° 35′ 39.9″, longitude 82° 35′ 35.8″.

On Clinch Mountain, about 4 miles southeast of Fairview, Va., latitude 36° 35′ 37.3″, longitude 82° 49′ 49.4″.

On the crest of Powell Mountain, about 8 miles northeast of Sedalia, Tenn., latitude 36° 35′ 38.0″, longitude 83° 10′ 32.3″.

About 3 miles south of Ewing, Va., latitude 36° 35′ 50.50″, longitude 83° 27′ 52.6″.

The following positions are on the Tennessee-Kentucky boundary:

At the southeast corner of Kentucky, about 2 miles southwest of Cumberland Gap, latitude 36° 34′ 57.1″, longitude 83° 41′ 28.1″.

Jellico, Tenn., an astronomic station, was established in the town of Jellico, at a point 516.3 feet south of the State line, latitude 36° 35′ 03.2″, longitude 84° 07′ 28.8″.

About 900 feet west of the town of Dukedom, Tenn., State line monument No. 8, latitude 36° 30′ 09.7″, longitude 88° 43′ 09.8″.[20]

The Geological Survey has located several other points on the boundary line near the Cumberland River.

A stone post near the Mississippi River, latitude 36° 29′ 51.1″, longitude 89° 29′ 01.2″.[21]

KENTUCKY[22]

Kentucky was included in the original limits of Virginia (fig. 10) and was a part of Augusta County, which was formed in 1738. In 1769 Botetourt County was created from a portion of Augusta County; in 1772, Fincastle from Botetourt; in 1776, Kentucky from Fincastle. The boundaries of these counties are described by Hening.[23]

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[20] See U. S. Geol. Survey Bull. 496, pp. 303–304, 1912, for this position and others farther west.

[21] Mississippi River Comm. Rept. for 1881, p. 35.

[22] The legal name for this State is "The Commonwealth of Kentucky."

In 1789 Virginia passed an act giving consent that the district of Kentucky be formed into a new State. Accordingly, by an act of Congress approved February 4, 1791, effective June 1, 1792,[24] Kentucky was admitted into the Union with substantially its present boundaries.

The cession by Virginia to the United States of the territory northwest of the Ohio, in 1784, made the north bank of that river the dividing line, and consequently it became the north boundary of the State of Kentucky, the exact line being fixed by the low-water stage of the river.[25] The western boundary, the middle of the Mississippi, was the line fixed by the treaty of peace in 1783.

The Supreme Court decided in 1820,[26] in a suit before it for the possession as a part of Kentucky of a tract of land on the north side of the Ohio, which at high water became an island, that

> No land can be considered an island unless it is surrounded by water at all times. The same tract of land can not be sometimes in Kentucky and sometimes in Indiana, according to the rise and fall of the river. It must be always in the one State or the other.

For a history of the boundary between Kentucky and Virginia and West Virginia, see Virginia, page 142; for the boundary between Kentucky and Tennessee, see Tennessee, page 183.

A peculiar situation exists at the extreme southwest corner of Kentucky, where, owing to a double bend in the Mississippi River, there is an area of about 10 square miles belonging to Kentucky that can not be reached from the rest of the State without passing through a part of Missouri or Tennessee.

OHIO

Ohio was the first State formed from the original "Territory northwest of the River Ohio." The congressional enabling act, approved April 30, 1802,[27] contained certain provisos with which the constitution of the proposed State must comply. It seems evident, therefore, that the constitution as framed required the approval of Congress before it became effective.

The constitutional convention completed its labors November 29, 1802; the constitution was referred to Congress and first considered in the Senate in January, 1803. Apparently it complied with the provisos of the enabling act, for under date of February 19, 1803, an act was approved "to provide for the due execution of the laws of the United States within the State of Ohio,"[28] in which reference was made to the action of the convention, thus virtually approving the constitution as submitted, although it provided for a change in the boundary described in the enabling act. Referring to the constitution as adopted, this act states, "whereby the said State became one of the United States of America." An act approved February 21, 1806,[29] appropriated money for the payment of salaries of the governor, secretary, and judges of the "late Territory" of Ohio from November 29, 1802, to "the first Tuesday in March, 1803" (March 1). It appears from this that March 1, 1803, was the date on which Congress assumed that Ohio statehood came into full effect. In further confirmation of this conclusion it should be noted that the Territorial Delegate in Congress retained his seat until March 1, 1803, and the first general assembly of the State convened on the same date.[30] Nevertheless, November 29, 1802, is most generally accepted as the date when Ohio became a State.

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[23] Hening, W. W., The statutes at large, a collection of all laws of Virginia, vol. 9, p. 257, 1821; vol. 10, p. 315, 1822.

[24] 1 Stat. L. 189.

[25] Wheaton 374; 136 U. S. 479.

[26] Wheaton 374.

[27] 2 Stat. L. 173.

The limits of the State as given in the enabling act are as follows:[31]

> bounded on the east by the Pennsylvania line, on the south by the Ohio River, to the mouth of the Great Miami river, on the west by the line drawn due north from the mouth of the Great Miami, aforesaid, and on the north by an east and west line, drawn through the southerly extreme of Lake Michigan, running east after intersecting the due north line aforesaid, from the mouth of the Great Miami until it shall intersect Lake Erie or the territorial line, and thence with the same through Lake Erie to the Pennsylvania line, aforesaid: *Provided*, that Congress shall be at liberty at any time hereafter, either to attach all the territory lying east of the line to be drawn due north from the mouth of the Miami, aforesaid, to the territorial line, and north of an east and west line drawn through the southerly extreme of Lake Michigan, running east as aforesaid to Lake Erie, to the aforesaid State, or dispose of it otherwise, in conformity to the fifth article of compact between the original States, and the people and States to be formed in the territory northwest of the river Ohio.

In the constitution of Ohio, article 7, section 6, the boundaries are described in the same words used in the enabling act but with the following proviso:

> *Provided always, and it is hereby fully understood and declared by this convention*, that if the southerly bend or extreme of Lake Michigan should extend so far south, that a line drawn due east from it should not intersect Lake Erie, or if it should intersect said Lake Erie east of the mouth of the Miami River [now Maumee River] of the Lake, then, and in that case, with the assent of the Congress of the United States, the northern boundary of this State shall be established by, and extending to, a direct line running from the

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[28] 2 Stat. L. 201.

[29] 2 Stat. L. 350.

[30] For a full discussion of this question see Mag. Am. History, October, 1887, pp. 306–316. See also Tannebill, J. W., Ohio interrogation points, p. 9, Columbus, 1920.

[31] 2 Stat. L. 173.

southern extremity of Lake Michigan to the most northerly cape of the Miami Bay, after intersecting the due north line from the mouth of the Great Miami River as aforesaid; thence northeast to the territorial line, and by the said territorial line to the Pennsylvania line.

The framers of the Ohio constitution had good reason for believing that the description of the northern boundary given in the enabling act was based on inaccurate maps[32] and that this description, if adhered to, would deprive the State of a large area that Congress intended it should have, and for this reason they inserted the proviso in the constitution. Ohio was admitted to the Union as a State without specific acceptance or rejection by Congress of this proviso.

In 1812 Congress authorized the survey of the line[33] as described in the enabling act of 1802, but the work was not undertaken until several years later, and then but little was accomplished.

Lines were run in 1817 by William Harris, under the direction of the surveyor general of Ohio, presumably by authority of the act of 1812—first a random or trial line due east from the southern extremity of Lake Michigan to the western Ohio line and another from the most northerly cape of Maumee Bay west and south to the due east line. Manuscript copies of the notes and plats of these lines are filed in the General Land Office. From the data thus obtained a true line was then run for the northern boundary of Ohio as described in the State constitution, on which 71 marks were established at mile intervals. This line is from 5 to 7 miles north of the due east line from the southern extremity of Lake Michigan. (See fig. 17.)

When news of this survey reached the Governor of Michigan it naturally called forth vigorous protests from him as well as from other residents of the Territory. After considerable fruitless discussion a committee was sent from Michigan to Washington to seek redress, with the result that an order was given to run the line as authorized by the act of 1812. This line was run in 1818. Congress neither confirmed nor rejected it. Ohio, as was to be expected, refused to accept it.

In order to have data for settling the dispute Congress in 1832[34] ordered the determination of latitude and longitude at important points on the two lines, and the positions of eight stations were found, but apparently no use was made of them. As time passed the boundary disputes grew more bitter until a crisis was reached in February, 1835, when the Ohio Legislature passed a resolution declaring the northern line to be the true boundary of the State and ordering that the State's jurisdiction be extended to that line.

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[32] See Lake Michigan as shown on the Mitchell map (pl. 5); also fig. 17; many other maps published prior to 1800 showed the lake in the same relative position.

[33] 2 Stat. L. 741.

[34] 4 Stat. L. 596.

Armed troops were assembled by both sides, and civil war seemed imminent. The President, Congress, and the courts were called on to settle the trouble, and a commission was sent from Washington in the hope of effecting a compromise.[35] Finally better judgment prevailed; Michigan was induced to suspend hostile actions, principally from the hope of statehood with increased territory on the north and a share in the allotment of public funds. Ohio on her part had every expectation of obtaining the coveted territory, and so this bloodless war came to an end.

Michigan Territory had for several years had a population large enough for admission to the Union as a State, but action was delayed because of the boundary dispute.

On June 15, 1836, an act was approved to establish the northern boundary of Ohio and admit Michigan as a State, provided the new State, by vote of a convention called for the purpose, accepted the boundary as thus described:[36]

> the northern boundary line of the State of Ohio shall be established at and shall be a direct line drawn from the southern extremity of Lake Michigan, to the most northerly cape of the Maumee (Miami) Bay, after that line, so drawn, shall intersect the eastern boundary line of the State of Indiana; and from the said north cape of the said bay, northeast to the boundary line between the United States and the Province of Upper Canada, in Lake Erie; and thence, with the said last-mentioned line, to its intersection with the western line of the State of Pennsylvania.

The line as above established was confirmed by congressional act of June 23, 1836,[37] thus giving Ohio full control over an area of 520 square miles, long in dispute.

The first Michigan convention voted against the acceptance of this boundary, but another one voted for its acceptance in December, 1836. The line as surveyed and marked in 1817 thus became the northern boundary of Ohio.

Parts of the line as marked in 1817 were retraced and re-marked in 1837 and 1842 by the General Land Office.

In 1915 the legislatures of the two States authorized the resurvey and monumenting of the line. All existing marks of the previous surveys were to be recovered, and where none existed straight lines were to be run between known points. The survey was commenced at the northwest corner of the State of Ohio, which, being in a public road, was marked by a large granite block set 12 inches below the road surface and by a granite "witness" post 12 by 12 inches in section and 5½ feet long set on the line 20 feet east of the corner. The position of this corner, which is on the Indiana line, is latitude 41°

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[35] See Way, W. V., The facts and historical events of the Toledo war of 1835, Toledo, 1869; and Faris, J. T., The romance of the boundaries, ch. 16, New York, 1926.

[36] 5 Stat. L. 49.

[37] 5 Stat. L. 56.

41′ 46.20″, longitude 84° 48′ 21.10″. The line is somewhat irregular, sections of it ranging from N. 85° 27′ E. to N. 89° 41′ E., with a mean of about N. 87° 55′ E. true bearing.

The last post set on the line (No. 71) is about 900 feet from the shore of Maumee Bay, and its position is latitude 41° 43′ 56.63″, longitude 83° 27′ 16.97″. The position of each of the other posts and the distance and bearing from each to the next are set forth in the Ohio State report of 1916, which gives a historical sketch of the line.[38]

The west boundary of Ohio is that fixed by the enabling act—a line due north from the mouth of the Miami River.[39] It was surveyed and marked in 1799 from the south end northward to Fort Recovery as the first principal meridian of the General Land Office. (See fig. 16.) This line was extended to the present northwest corner of the State in 1817.

The south boundary is the low-water line on the north bank of the Ohio.

For a description of the east boundary see Pennsylvania, page 123.

INDIANA

By the act approved May 7, 1800, to take effect on and after July 4 of that year, the "Territory northwest of the River Ohio" was divided into two parts, the eastern part to retain the old name, the western part to become the Territory of Indiana. (See fig. 16.) The description of the boundary line between these two Territories is given in the act as follows:[40]

> That from and after the fourth day of July next, all that part of the territory of the United States northwest of the Ohio river, which lies to the westward of a line beginning at the Ohio, opposite to the mouth of Kentucky river, and running thence to Fort Recovery, and thence north until it shall intersect the territorial line between the United States and Canada, shall, for the purpose of temporary government, constitute a separate Territory, and be called Indiana Territory.
>
> * * * * * * *
>
> That whenever that part of the territory of the United States which lies to the eastward of a line beginning at the mouth of the Great Miami river, and running thence due north to the territorial line between the United States and Canada, shall be erected into an independent state, and admitted into the Union on an equal footing with the original states, thenceforth said line shall become and remain permanently the boundary line between such State and the Indiana Territory, anything in this act contained to the contrary notwithstanding.

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[38] Sherman, C. E., The Ohio-Michigan boundary. See also Soule, A. M., The southern and western boundaries of Michigan: Michigan Pioneer and Hist. Coll., vol. 27, pp. 346–378, Lansing, 1897, which gives an excellent history of the boundary dispute with many references; and 24th Cong., 1st sess., S. Doc. 6, 1835, which gives a history of the line down to 1835.

[39] The present mouth of the Miami River is a short distance east of the mouth in 1799.

[40] 2 Stat. L. 58.

The line from the Ohio River running northeastward to Fort Recovery was the boundary of an Indian cession established by the "Greenville treaty"[41] of 1795.

In the Ohio enabling act (of 1802) provision was made for the addition to Indiana Territory of a triangular strip of land between Ohio and that Territory and of that part of the Territory northwest of the River Ohio north of the limits of the new State (Ohio) and east of Indiana, as follows:[42]

> All that part of the territory of the United States northwest of the river Ohio heretofore included in the eastern division of said territory, and not included within the boundary herein prescribed for the said state, is hereby attached to and made a part of the Indiana territory.

The admission of Ohio as a State removed from Indiana Territory a narrow strip about 1¼ miles wide north of Fort Recovery. (See fig. 16.)

On June 30, 1805, by an act approved January 11, 1805,[43] the northeastern part of Indiana Territory was cut off and organized as Michigan Territory. For the divisional line between the two Territories see Michigan, page 195.

On March 1, 1809, by an act approved February 3, 1809, Indiana Territory was again divided, and the western part was organized as Illinois Territory.[44] For a description of the line separating these two Territories see Illinois, page 193.

On December 11, 1816, Indiana was admitted as a State with the limits as given in the following extract from the enabling act, approved April 19, 1816, which have not since been changed:[45]

> the said State shall consist of all the territory included within the following boundaries, to wit: Bounded on the east, by the meridian line which forms the western boundary of the State of Ohio; on the South, by the river Ohio, from the mouth of the Great Miami River, to the mouth of the River Wabash; on the west by a line drawn along the middle of the Wabash, from its mouth to a point where a due north line drawn from the town of Vincennes, would last touch the northwestern shore of the said river; and from thence by a due north line, until the same shall intersect an east and west line drawn through a point ten miles north of the southern extreme of lake Michigan; on the north by the said east and west line until the same shall intersect the first-mentioned meridian line which forms the western boundary of the state of Ohio.

A provision in this act required that the boundaries as therein described be ratified by a constitutional convention to be called, otherwise they would be fixed as described in article 5 of the ordinance of 1787. By ratifying them, June 29, 1816, Indiana missed an opportunity for including in its limits a considerably larger territory than it now has. There was a similar proviso in the enabling act of 1818 for Illinois.

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[41] Bur. Am. Ethnology Eighteenth Ann. Rept., pt. 2, p. 654, 1899.

[42] 2 Stat. L. 174.

[43] 2 Stat. L. 309.

[44] 2 Stat. L. 514.

[45] 3 Stat. L. 289.

The north boundary of Indiana is parallel to and 10 miles north of the line which runs due east from the southern extremity of Lake Michigan.[46] A survey of this line was made in 1827 in accordance with the act of Congress of March 2 of that year.[47] The

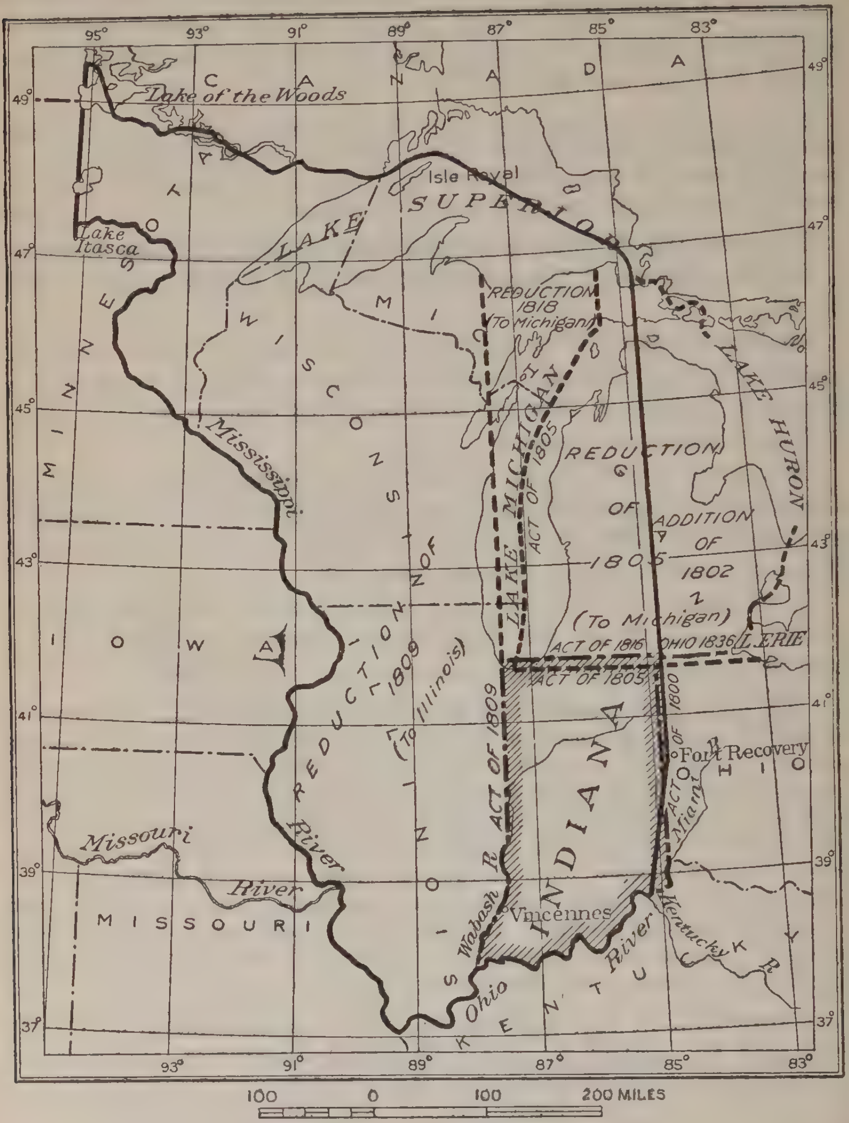
95°
93°
91°
89°
87°
85°
83°
49°
47°
45°
43°
41°
39°
37°
CANADA
Lake of the Woods
Isle Royal
LAKE SUPERIOR
Lake Itasca
MINNESOTA
WISCONSIN
MICHIGAN
REDUCTION 1818 (To Michigan)
LAKE MICHIGAN
ACT OF 1805
REDUCTION OF 1805
ADDITION OF 1802 (To Michigan)
LAKE HURON
Mississippi River
REDUCTION 1809 (To Illinois)
ILLINOIS
IOWA
Missouri River
MISSOURI
ACT OF 1816
OHIO 1836
L. ERIE
ACT OF 1805
ACT OF 1800
ACT OF 1809
INDIANA
Fort Recovery
OHIO
Miami R
Wabash R
Vincennes
Ohio River
KENTUCKY
Kentucky R
100
0
100
200 MILES

FIGURE 16.—Historical diagram of Indiana

original plat of the survey was filed in the surveyor general's office in Chillicothe, Ohio, and a copy in the General Land Office in Washington. The approximate latitude as determined in 1827 is 41° 47′ 43″, but recent measurements by the Geological Survey near the east end [48] give the latitude as 41° 45′ 33″. The mark nearest Lake Michigan is in latitude 41° 45′ 36.17″, longitude 86° 46′ 03.16″ (North American datum). Parts of this line were retraced in 1828, 1834, 1839, and 1842 by the General Land Office.

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[46] 3 Stat. L. 289.

[47] 4 Stat. L. 237. For map and description see 20th Cong., 1st sess., H. Doc. 187, 1828.

For a description of the east boundary see Ohio, page 187. For a description of the west boundary, see Illinois, below.

The south boundary is the low-water line on the north side of the Ohio River.

ILLINOIS

Illinois Territory, originally part of the Territory northwest of the River Ohio and subsequently a part of Indiana Territory, was organized by act of February 3, 1809,[49] effective March 1, 1809. The following clause from the act separating it from Indiana Territory defines its boundary [49] (see fig. 16):

> from and after the first day of March next, all that part of the Indiana territory which lies west of the Wabash river, and a direct line drawn from the said Wabash river and Post Vincennes, due north to the territorial line between the United States and Canada, shall, for the purpose of temporary government, constitute a separate territory, and be called Illinois.

Illinois was admitted as a State with its present boundaries by resolution approved December 3, 1818.[50] The enabling act defines these boundaries as follows;[51]

> the said State shall consist of all the territory included within the following boundaries, to wit: Beginning at the mouth of the Wabash river; thence up the same and with the line of Indiana, to the northwest corner of said state; thence, east with the line of the same state, to the middle of Lake Michigan; thence north along the middle of said lake to the north latitude forty-two degrees thirty minutes; thence west to the middle of the Mississippi river; and thence down along the middle of that river to its confluence with the Ohio River; and thence up the latter river along its northwestern shore to the beginning;

The eastern boundary of Illinois was ordered surveyed in 1810 in connection with the work of the General Land Office. In 1821 the Legislatures of the States of Indiana and Illinois ordered a survey of their common boundary. A commissioner representing each State was appointed, and the line was run and marked with wooden posts the same year from a point "opist the Vincennes Hotell on the N. W. Bank of Wabash river" northward to Lake Michigan. There is a signed copy of the field notes in the Indiana State Library at Indianapolis.

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[48] U. S. Geol. Survey Bull. 644, p. 305, 1916.

[49] 2 Stat. L. 514.

[50] 3 Stat. L. 536.

[51] 3 Stat. L. 429.

The Geological Survey determined the position of a large stone post on the north bank of the Wabash where the State boundary line leaves the river as latitude 39° 20′ 57.6″, longitude 87° 31′ 52.9″. At latitude 41° 17′ 53″, the longitude of the line is 87° 31′ 36.5″.

The northern boundary was surveyed and marked in 1831–32 by commissioners representing the United States and Illinois. The position on the east side of the Mississippi of a point in latitude 42° 30′ having been found by observation, a stone about 7 feet long and of an estimated weight of 5 tons was set in the ground on the high-water line. The stone was marked "Illinois" on its south side and "Michigan latitude 42° 30′ N." on its north side. (The Mississippi River Commission later located this stone or one on the State line near it and determined its latitude as 42° 30′ 29.3″.) From this point the line was run east to the fourth principal meridian of the General Land Office, where a large mound of earth was erected, and was continued east to the Rock River. Observations then taken showed that the line was 54″ too far north. An offset was taken the proper distance to the south, and a post was set on the east bank of the river, 81 miles 31 chains 9 links from the Mississippi, from which the line was extended (with frequent astronomic observations) to Lake Michigan, where an oak post 12 inches square and 9 feet long was set 5 feet in the ground at a point about 1 chain from the lake shore. Recent observations show that this end of the marked line is about half a mile south of the parallel of 42° 30′. The total length of the boundary as measured is 144 miles 48 chains 80 links. A post was also set on the east bank of the Fox River 125 miles 9 chains 10 links from the initial point. There is a signed copy of the report and notes in the files of the General Land Office.[52] The line west of the Rock River was later rerun and placed in a corrected position.

On April 18 and 19, 1881, the Mississippi River cut across a narrow strip of land near the town of Kaskaskia, Ill., and formed a new channel 4 miles east of its former position, thereby leaving an area of about 27 square miles on the west side of the river that belongs to the State of Illinois.[53]

The parts of the northern and eastern boundaries of Illinois in Lake Michigan are as follows: The north line of the State runs due east from the last point marked on land (latitude 42° 29′ 37″, nearly) to the middle of the lake, a distance of about 40 miles. The east line then follows the middle of the lake southward for about 52 miles, to the Indiana line (which there runs east and west through a point 10 miles north of the southernmost part of the lake). The Illinois line then runs due west for about 17 miles to the northwest corner of Indiana, which is about 1½ miles from land, thence south about 3½ miles along the Indiana line to the lake shore.

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[52] Boundaries, No. 22. See U. S. Geol. Survey Bulls. 310, 551, and 644 for latitude and longitude of points on this line.

[53] A detailed description of this avulsion, with maps, is given in Illinois State Hist. Soc. Trans. for 1914, pp. 95–113. For a recent map of the area see the Geological Survey map of the Chester quadrangle, Ill.-Mo.

MICHIGAN

Michigan was organized as a Territory June 30, 1805, from the northeastern part of Indiana Territory. (See fig. 17.) The following clause from the act dividing Indiana Territory defines its limits:[54]

> from and after the thirtieth day of June next, all that part of the Indiana territory which lies north of a line drawn east from the southerly bend or extreme of Lake Michigan, until it shall intersect Lake Erie, and east of a line drawn from the said southerly bend through the middle of said lake to its northern extremity, and thence due north to the northern boundary of the United States, shall, for the purpose of temporary government, constitute a separate territory, and be called Michigan.

The enabling act for Illinois, passed in 1818, contained a provision transferring to Michigan Territory the portion of Illinois Territory not included in the State of that name and also an area of 5,880 square miles north of latitude 42° 30′, then a part of Indiana Territory. The following is the text of the clause referred to:[55]

> all that part of the territory of the United States lying north of the State of Indiana, and which was included in the former Indiana territory, together with that part of the Illinois territory which is situated north of and not included within the boundaries prescribed by this act, to the state thereby authorized to be formed, shall be, and hereby is, attached to and made a part of the Michigan territory.

On June 28, 1834, an act was passed extending the limits of the Territory of Michigan to Missouri River. The clause of the act relating to this area is as follows:[56]

> all that part of the territory of the United States bounded on the east by the Mississippi River, on the south by the state of Missouri, and a line drawn due west from the northwest corner of said state to the Missouri river; on the southwest and west by the Missouri river and the White Earth river, falling into the same; and on the north, by the northern boundary of the United States, shall be, and hereby is, for the purpose of temporary government, attached to and made a part of, the territory of Michigan.

Wisconsin Territory was formed in 1836 from the western part of Michigan Territory; for a description of the dividing line see Wisconsin, page 197.

Michigan was admitted to the Union on January 26, 1837,[57] with the proviso and boundaries given in the enabling act as follows:[58]

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[54] 2 Stat. L. 309.

[55] 3 Stat. L. 431.

[56] 4 Stat. L. 701.

[57] 5 Stat. L. 144.

[58] 5 Stat. L. 49.

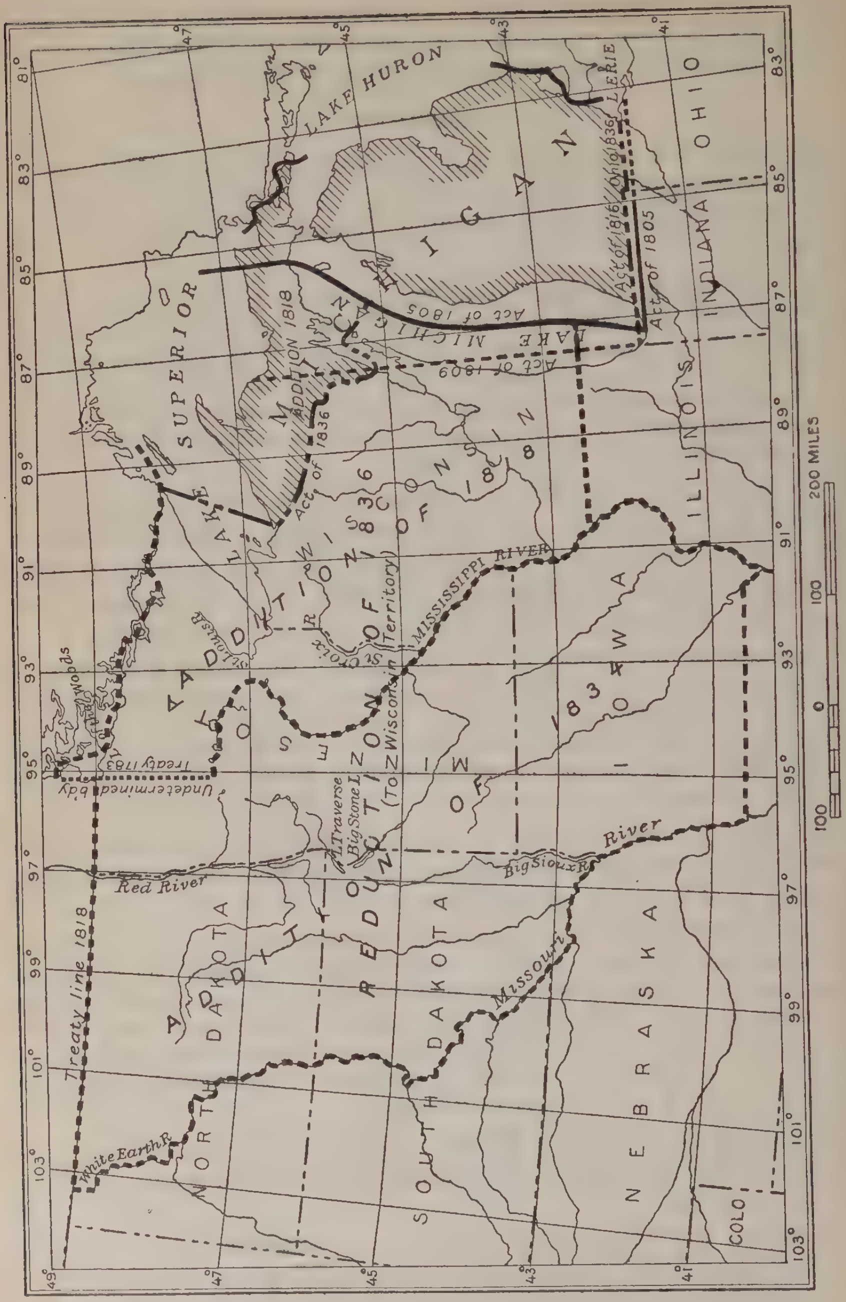
LAKE HURON
LAKE SUPERIOR
LAKE MICHIGAN
LAKE ERIE
MICHIGAN
OHIO
INDIANA
ILLINOIS
IOWA
NEBRASKA
NORTH DAKOTA
SOUTH DAKOTA
COLO
Act of 1805
Act of 1809
Act of 1816
Ohio 1836
Act of 1836
ADDITION 1818
Treaty 1783
Undetermined bdy.
Treaty line 1818
Lake of the Woods
Red River
White Earth R.
L. Traverse
Big Stone L.
Big Sioux R.
Missouri River
MISSISSIPPI RIVER
St. Louis R.
St. Croix R.
(To Wisconsin Territory)
81°
83°
85°
87°
89°
91°
93°
95°
97°
99°
101°
103°
49°
47°
45°
43°
41°
100
0
100
200 MILES

FIGURE 17.—Historical diagram of Michigan

> *Provided, always,* and this admission is upon the express condition, that the said State shall consist of and have jurisdiction over all the territory included within the following boundaries, and over none other, to wit:
>
> Beginning at the point where the above-described northern boundary of the State of Ohio intersects the eastern boundary of the State of Indiana, and running thence with the said boundary line of Ohio, as described in the first section of this act, until it intersects the boundary line between the United States and Canada in Lake Erie; thence with the said boundary line between the United States and Canada, through the Detroit river, Lake Huron, and Lake Superior, to a point where the said line last touches Lake Superior; thence in a direct line through Lake Superior to the mouth of the Montreal river; thence through the middle of the main channel of the said river Montreal, to the middle of the Lake of the Desert; thence in a direct line to the nearest headwater of the Menomonie river; thence through the middle of that fork of the said river first touched by the said line, to the main channel of the said Menomonie river; thence down the center of the main channel of the same, to the center of the most usual ship channel of the Green bay of Lake Michigan; thence through the center of the most usual ship channel of the said bay to the middle of Lake Michigan; thence through the middle of Lake Michigan, to the northern boundary of the State of Indiana, as that line was established by the act of Congress of the nineteenth of April, eighteen hundred and sixteen; thence due east, with the north boundary line of the said State of Indiana, to the northeast corner thereof; and thence, south, with the east boundary line of Indiana to the place of beginning.

The above-described boundaries remain unchanged.

WISCONSIN[59]

Wisconsin was organized as a Territory July 3, 1836, and admitted as a State May 29, 1848.

As originally constituted its area comprised all that part of the former Territory of Michigan which lay west of the present limits of the State of Michigan. (See fig. 17.) The limits are defined in the act for its organization as follows:[60]

> Bounded on the east, by a line drawn from the northeast corner of the State of Illinois, through the middle of Lake Michigan, to a point in the middle of said lake, and opposite the main channel of Green Bay; and through said channel and Green Bay to the mouth of the Menomonie river; thence through the middle of the main channel of said river, to that head of said river nearest to the Lake of the Desert; thence in a direct line to the middle of said lake; thence through the middle of the main channel of the Montreal river, to its mouth; thence with a direct line across Lake Superior to where the territorial line of the United States last touches said lake northwest; thence on the north with the said territorial line to the White-earth river; on the west, by a line from the said boundary line following down the middle of the main channel of White-earth river to the Missouri river, and down the middle of the main channel of the Missouri river to a point due west from the northwest corner of the State of Missouri; and on the south, from said point, due east to the north-

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[59] For a general description of the boundaries of Wisconsin and a historical sketch of the acts by which they were fixed see Thwaites, R. G., Wisconsin State Hist. Soc. Coll., vol. 11, pp. 451–501, Madison, 1888.

[60] 5 Stat. L. 11.

> west corner of the State of Missouri; and thence with the boundaries of the States of Missouri and Illinois, as already fixed by acts of Congress.

In 1838 all that part of the territory lying west of the Mississippi and a line drawn due north from its source to the international boundary—that is, all that part which was originally comprised in the Louisiana Purchase and the Red River drainage basin south of the 49th parallel—was organized as the Territory of Iowa. (See Iowa, p. 203.)

When the Territory of Wisconsin was organized it was supposed that there was an almost continuous water-boundary line between Michigan and Wisconsin from Green Bay to Lake Superior. Congress in 1838 ordered the running and marking of this boundary,[61] but it was soon discovered that the line could not be run as described, for the head of the Montreal River is more than 50 miles from the Lake of the Desert (now called Lac Vieux Desert), which was supposed to be its source. It was therefore recommended that the boundary location be changed to the position later described in the Wisconsin enabling act of 1846 [62] and in greater detail in the Michigan constitution of 1850, which reads as follows: [63]

> through Lake Superior to the mouth of the Montreal river; thence through the middle of the main channel of the said river Montreal to the head waters thereof; thence in a direct line to the center of the channel between Middle and South islands in the Lake of the Desert; thence in a direct line to the southern shore of Lake Brule; thence along said southern shore and down the river Brule to the main channel of the Menominee river; thence down the center of the main channel of the same to the center of the most usual ship channel of the Green Bay of Lake Michigan.

The line through Lake Superior is thus described in the Wisconsin enabling act of 1846: [64]

> thence down the main channel of the Montreal River to the middle of Lake Superior; thence through the centre of Lake Superior to the mouth of St. Louis River.

The straight parts of the boundary were surveyed and marked, in 1847, from a point where the Balsam River and the Pine River unite to form the Montreal, S. 74° 27′ E. to the Lake of the Desert, a distance of 50 miles 67 chains 6 links. The southern part of the line begins at the lower end of Lake Brule and runs N. 59° 38′ W. for 13 miles 37 chains 66 links to an intersection with the former line in the Lake of the Desert.[65]

Suit was commenced by Michigan in the United States Supreme Court in October, 1923, for a redetermination of the Michigan-

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[61] 5 Stat. L. 244.

[62] 9 Stat. L. 56–57.

[63] Thorpe, F. N., op. cit., vol. 4, p. 1945.

[64] 9 Stat. L. 56–57. Thorpe, F. N., op. cit., vol. 7, p. 4072.

[65] See General Land Office files, Boundaries, No. 39, 1 and 2.

Wisconsin boundary, the claim being made that the surveys of 1840–1847 were not in accord with the descriptions. The change from the previously accepted boundary to that proposed by Michigan would have resulted in a loss to Wisconsin of about 255,000 acres of land, but the court by decree dated March 1, 1926,[66] confirmed Wisconsin's title to the disputed area, principally because

> The rule, long settled and never doubted by this court, is that long acquiescence by one State in the possession of territory by another and in the exercise of sovereignty and dominion over it is conclusive of the latter's title and rightful authority.

A resurvey of the Michigan-Wisconsin line was completed in 1929 by commissioners representing the two States. There are now 160 concrete monuments on this 65-mile line. This work was executed in accordance with the Supreme Court decree of November 22, 1926.

The boundary from Lake Brule to the mouth of the Menominee is practically that described in the enabling act and

> follows the channels of the Brule and Menominee wherever they are free from islands; * * * wherever islands are encountered above Quinnesec Falls the line follows the channel nearest the Wisconsin mainland, so as to throw all such islands into Michigan; and * * * wherever islands are encountered below Quinnesec Falls the line follows the channel nearest the Michigan mainland, so as to throw all such islands into Wisconsin.

Through Green Bay the line was fixed as claimed by Wisconsin and includes in that State Washington, Detroit, Plum, Rock, and some smaller islands.

On March 3, 1847, a supplementary act for the admission of Wisconsin was passed by Congress, in which the western boundary of the proposed State was described as follows:

> That the assent of Congress is hereby given to the change of boundary proposed in the first article of said constitution, to wit: leaving the boundary line prescribed in the act of Congress entitled "An Act to enable the People of Wisconsin Territory to form a Constitution and State Government, and for the Admission of such State into the Union," at the first rapids in the river St. Louis; thence in a direct line southwardly to a point fifteen miles east of the most easterly point of Lake St. Croix; thence due south to the main channel of the Mississippi River or Lake Pepin; thence down the said main channel, as prescribed in said act.

This act had it been accepted would have given the State an area considerably less than it now has.

The first constitution, completed December 16, 1846,[67] accepted the boundaries as described in the enabling act of August 6, 1846, but proposed that Congress consent to the change as described in the later act above referred to. This constitution was rejected by popular vote April 5, 1847 (14,119 ayes, 20,231 noes)—not, however, because of unsatisfactory boundaries.

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[66] 270 U. S. 295; 272 U. S. 398.

[67] The full text of this constitution is given by Quaife, M. M., Wisconsin State Hist. Soc. Coll., vol. 27, pp. 732–753, Madison, 1919.

A second constitution dated February 1, 1848, with the boundaries also as described in the act of August 6, 1846, was accepted by the people but with the proviso (art. 2, sec. 1) that, if Congress approved, the boundary line should run southwesterly from the foot of the rapids of the St. Louis River to the mouth of the Rum River, thence down the Mississippi River as previously described. This boundary would have added materially to the area of the State had it been accepted by Congress.

Congress accepted the constitution dated February 1, 1848, without action on the proviso and by act approved May 29, 1848,[68] admitted Wisconsin as a State.

The admission of Wisconsin to statehood left an area of more than 30,000 square mile west of the St. Croix River, east and north of the Mississippi River, practically without a government. The settlers organized a temporary government and elected a Delegate to Congress who was admitted as the representative of the "Territory of Wisconsin." This area became a part of the Territory of Minnesota by congressional act of March 3, 1849.

The State of Minnesota in 1916 instituted a suit against Wisconsin in the United States Supreme Court in order to have that part of the State boundary line from St. Louis Bay up the St. Louis River to the falls near Fond du Lac finally determined. The court handed down an opinion March 8, 1920,[69] and on October 11, 1920,[70] appointed commissioners to survey and mark the line. The survey was made on the ice during the winter of 1920–21, and the commissioners' report was confirmed by the court February 27, 1922.[71] The line surveyed was 18.4 miles in length and was almost entirely over water. Rectangular coordinates were computed for each angle, and suitable reference marks were established on shore.

The meridian boundary between Wisconsin and Minnesota from the St. Louis River to the St. Croix River was surveyed and marked in 1852 under the General Land Office.

For the southern boundary see Illinois, page 194.

MISSOURI

The name of the Territory of Louisiana was changed in 1812[72] to Territory of Missouri. At that time the Territory included all the original Louisiana Purchase, except the State of Louisiana. (See fig. 18.)

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[68] 9 Stat. L. 233.

[69] 252 U. S. 273.

[70] 254 U. S. 14.

[71] 258 U. S. 149.

[72] 2 Stat. L. 743.

Missouri was declared a State on August 10, 1821, by presidential proclamation, under authority of the joint resolution of Congress of March 2, 1821,[73] with boundaries as defined in the enabling act of March 6, 1820,[74] as follows:

> Beginning in the middle of the Mississippi river, on the parallel of thirty-six degrees of north latitude; thence west along that parallel of latitude, to the St. Francois river; thence up, and following the course of that river, in the middle of the main channel thereof, to the parallel of latitude of thirty-six degrees and thirty minutes;[75] thence west, along the same, to a point where the said parallel is intersected by a meridian line passing through the middle of the mouth of the Kansas river, where the same empties into the Missouri river, thence from the point aforesaid north, along the said meridian line, to the intersection

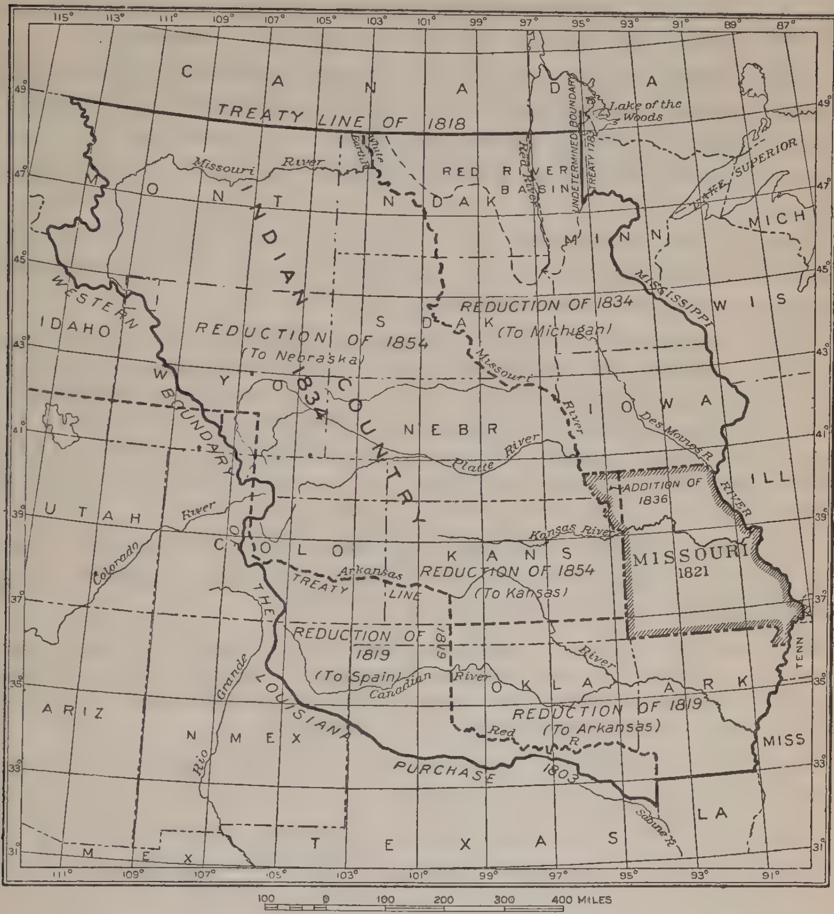
CANADA
TREATY LINE OF 1818
Lake of the Woods
UNDETERMINED BOUNDARY
TREATY 1783
RED RIVER BASIN
Red River
White Earth R.
Missouri River
MONT
N DAK
MINN
LAKE SUPERIOR
MICH
WIS
MISSISSIPPI
INDIAN COUNTRY 1834
REDUCTION OF 1834 (To Michigan)
REDUCTION OF 1854 (To Nebraska)
S DAK
WESTERN BOUNDARY OF THE LOUISIANA PURCHASE 1803
IDAHO
WYO
NEBR
Platte River
IOWA
Des Moines R
ADDITION OF 1836
ILL
RIVER
UTAH
River
Colorado
COLO
Kansas River
KANS
REDUCTION OF 1854 (To Kansas)
MISSOURI 1821
Arkansas
TREATY LINE 1819
REDUCTION OF 1819 (To Spain)
Canadian River
River
OKLA
ARK
TENN
REDUCTION OF 1819 (To Arkansas)
Red R
ARIZ
N MEX
Rio Grande
MISS
TEXAS
LA
Sabine R
MEX
115° 113° 111° 109° 107° 105° 103° 101° 99° 97° 95° 93° 91° 89° 87°
49° 47° 45° 43° 41° 39° 37° 35° 33° 31°
100 0 100 200 300 400 MILES

FIGURE 18.—Historical diagram of Missouri

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[73] 3 Stat. L. 645, 797.

[74] 3 Stat. L. 545.

[75] This line (36° 30′) has since been known as the Missouri Compromise line.

> of the parallel of latitude which passes through the rapids of the river Des Moines, making the said line to correspond with the Indian boundary line; thence east from the point of intersection last aforesaid, along the said parallel of latitude, to the middle of the channel of the main fork of the said river Des Moines; thence down and along the middle of the main channel of the said river Des Moines, to the mouth of the same, where it empties into the Mississippi river; thence due east to the middle of the main channel of the Mississippi river; thence down, and following the course of the Mississippi river, in the middle of the main channel thereof, to the place of beginning.

The peculiar jog or "panhandle" at the southeast corner of the State, between the Mississippi and St. Francis Rivers, is said to be the result of efforts of a prominent property owner who lived south of the parallel of 36° 30′ to have his plantation included in the new State.[76]

In 1836 the boundaries were extended on the northwest to the Missouri River, as described in the following act of the legislature amendatory to the constitution of 1820:[77]

> That the boundary of the State be so altered and extended as to include all that tract of land lying on the north side of the Missouri River and west of the present boundary of this State, so that the same shall be bounded on the south by the middle of the main channel of the Missouri River and on the north by the present northern boundary line of the State, as established by the constitution, when the same is continued in a right line to the west, or to include so much of said tract of land as Congress may assent.

This was ratified by Congress on June 7, 1836, and was declared in effect by presidential proclamation of March 28, 1837. The following is an extract from the act.[78]

> That when the Indian title to all the lands lying between the State of Missouri and the Missouri river shall be extinguished, the jurisdiction over said lands shall be hereby ceded to the State of Missouri, and the western boundary of said State shall be then extended to the Missouri river.

The north boundary of Missouri was surveyed and marked in part in 1816 and the remainder in 1850 under the General Land Office.[79]

The Territory remaining after the formation of the State bore the name of Missouri for many years. In 1834 the part north of the State of Missouri and east of the Missouri and White Earth Rivers was annexed to the Territory of Michigan. (For further history of this portion, see Michigan, p. 195; Iowa, p. 204; Minnesota, p. 206; and Dakota, p. 208.) In 1854 Kansas and Nebraska Territories were formed, absorbing the remainder. (See Kansas, p. 214, and Nebraska, p. 211.)

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[76] Violette, E. M., A history of Missouri, p. 111, New York, 1918.

[77] Thorpe, F. N., op. cit., vol. 4, p. 2170.

[78] 5 Stat. L. 34.

[79] Nearly all the boundaries of States west of the Mississippi were surveyed under the direction of the General Land Office, most of them by contract surveyors. The field notes and plats for these surveys have been catalogued and are filed in Division L of the General Land Office, where they can be consulted by anyone wishing full details for any line.

The following are the boundaries of Missouri as at present established by statute: The east boundary is the middle of the main channel of the Mississippi [80] from the mouth of the Des Moines to its point of intersection with the 36th parallel of latitude; the south boundary begins at the latter point and runs west on the 36th parallel to the St. Francis River, thence up the mid-channel of that river to the parallel of 36° 30′, thence west on that parallel to its intersection by a meridian passing through the middle of the mouth of the Kansas River; the west boundary is the last-mentioned meridian as far north as the mouth of the Kansas River, thence it follows northwestward the mid-channel of the Missouri River to the parallel of latitude passing through the rapids of the Des Moines River, which is approximately the parallel of 40° 35′; the north boundary is the last-mentioned parallel as far east as its point of intersection with the Des Moines River, whence it follows the mid-channel of the Des Moines River southward to its mouth.

For the survey of the south boundary see Arkansas, pages 178–186, and for the north boundary see Iowa, pages 204–205.

The west boundary of Missouri south of the mouth of the Kansas River was surveyed in 1823, and a large stone post was set to mark the southwest corner of the State, at a point which sextant observations showed to be in latitude 36° 30′. This position as determined by the Geological Survey in 1906 is latitude 36° 29′ 58.0″, longitude 94° 37′ 02.9″.[81] The 1823 survey of the south boundary of the State was begun at this stone. In 1845 a mound of earth having a 10-foot base and 5 feet high was placed at a point 4.83 chains farther south.

The west boundary of the State was resurveyed and re-marked in 1844–45.[82]

A dispute concerning the river boundary between Missouri and Nebraska was settled in 1904 by the Supreme Court,[83] which reaffirmed the old rule that a sudden change in the course of a river does not affect a boundary line.

IOWA

Iowa was organized as a Territory by act of June 12, 1838, effective July 3, from a portion of Wisconsin Territory. (See figs. 17 and 18.) The limits were defined as follows in the act [84] creating it:

> all that part of the present Territory of Wisconsin which lies west of the Mississippi river, and west of a line drawn due north from the headwaters or sources of the Mississippi to the Territorial line.

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[80] See 138 U. S. 226.

[81] U. S. Geol. Survey Bull. 440, p. 488, 1910.

[82] For geographic positions of three State line points near Kansas City see U. S. Coast and Geodetic Survey Special Pub. 30, p. 31, 1915.

[83] 196 U. S. 23; 197 U. S. 577.

[84] 5 Stat. L. 235.

The approximate position of the outlet of Lake Itasca, which is generally accepted as the source of the Mississippi (see footnote, p. 31), is latitude 47° 15⅓′, longitude 95° 12½′. The river runs northwestward for about 6 miles before it turns east. The north-south boundary line across the western part of the Lake of the Woods is in longitude 95° 09′ 11.6″ (p. 14).

The lawmakers in Congress in writing the act creating the Territory of Iowa evidently had in mind their troubles over the Ohio-Michigan boundary, and to avoid any future question as to the power of Congress they reserved the right to divide the new Territory into two or more Territories or to attach any part of it to any other State or Territory.

The following clause from an act passed in 1839 is supplementary to the act above quoted:[85]

> That the middle or center of the main channel of the river Mississippi shall be deemed, and is hereby declared, to be the eastern boundary line of the Territory of Iowa, so far or to such extent as the said Territory is bounded eastwardly by or upon said river.

On March 3, 1845, an act was approved for the admission of Iowa to the Union as a State, but the act required that the assent of the people of Iowa be given to it by popular vote. In this act the boundaries were given as follows:[86]

> That the following shall be the boundaries of the said State of Iowa, to wit: Beginning at the mouth of the Des Moines river, at the middle of the Mississippi, thence by the middle of the channel of that river to a parallel of latitude passing through the mouth of the Mankato or Blue-Earth river [latitude 44° 10′], thence west along the said parallel of latitude to a point where it is intersected by a meridian line, seventeen degrees and thirty minutes west of the meridian of Washington city, thence due south to the northern boundary line of the State of Missouri, thence eastwardly following that boundary to the point at which the same intersects the Des Moines river, thence by the middle of the channel of that river to the place of beginning.

These boundaries were not acceptable to the people and by a popular vote were rejected.

Another constitutional convention was held in May, 1846, and Congress passed an act, approved August 4, 1846, fixing the boundaries in accordance with the wishes of the people and described as follows:[87]

> Beginning in the middle of the main channel of the Mississippi River at a point due east of the middle of the mouth of the main channel of the Des Moines River; thence up the middle of the main channel of the said Des Moines River to a point on said river where the northern boundary line of the State of Missouri, as established by the constitution of that State, adopted June twelfth, eighteen hundred and twenty, crosses the said middle of the main

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[85] 5 Stat. L. 357.

[86] 5 Stat. L. 742.

[87] 9 Stat. L. 52.

channel of the said Des Moines River; thence westwardly along the said northern boundary line of the State of Missouri, as established at the time aforesaid, until an extension of said line intersect the middle of the main channel of the Missouri River, thence up the middle of the main channel of the said Missouri River, to a point opposite the middle of the main channel of the Big Sioux River, according to Nicollet's map; thence up the main channel of the said Big Sioux River, according to said map, until it is intersected by the parallel of forty-three degrees and thirty minutes north latitude; thence east along said parallel of forty-three degrees and thirty minutes, until said parallel intersect the middle of the main channel of the Mississippi River; thence down the middle of the main channel of said Mississippi River to the place of beginning.

Iowa was finally declared admitted to full statehood by act of December 28, 1846.[88]

The admission of Iowa appears to have left a large area to the north and west unattached, which so remained until Minnesota Territory was organized, in 1849.

The act of August 4, 1846, directed that a long-standing dispute between Missouri and Iowa Territory regarding their common boundary[89] be referred to the United States Supreme Court for adjudication. The area claimed by both was a strip of land about 10 miles wide and 200 miles long, north of the present boundary. Missouri maintained that the clause in that State's enabling act, "the rapids of the river Des Moines," referred to rapids in the river of that name and not to rapids of a similar name in the Mississippi, also that the Indian boundary line run and marked in 1816 by authority of the United States, known as the Sullivan line, was erroneously established. A line claimed by Missouri was run by J. C. Brown in 1837 by order of the State legislature.

The United States Supreme Court decided in 1849 that the Sullivan line of 1816 is the correct boundary and ordered that it be resurveyed. The report of the commissioners appointed by the court to re-mark the line was accepted in 1851.[90]

So many of the marks on this line as established in 1850 had become lost or destroyed that the United States Supreme Court in 1896 ordered that certain parts be reestablished, especially those between mileposts 50 and 55.[91] Accordingly 20 miles of line was resurveyed by officers of the United States Coast and Geodetic Survey in 1896, and durable monuments of granite or iron were established thereon.[92] The geographic position of milepost No. 40 was determined as latitude 40° 34.4′, longitude 95° 51′, and that of No. 60 as latitude 40° 34.6′, longitude 93° 28′.

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[88] 9 Stat. L. 117. See James, J. A., The admission of Iowa into the Union: Am. Hist. Assoc. Ann. Rept. for 1897 (55th Cong., 2d sess., H. Doc. 577), pp. 163–173.

[89] See 25th Cong., 3d sess., H. Doc. 128, 1839.

[90] For a history of the line, discussion of the case, report of commissioners, description of monuments, distances, etc., see 7 Howard 660 and 10 Howard 1.

[91] 160 U. S. 688.

[92] For a full report, which contains extracts from notes of previous surveys, see 165 U. S. 118, also U. S. Coast and Geodetic Survey Rept. for 1896, p. 51.

The survey of the north boundary of Iowa on the parallel of 43° 30′, authorized by congressional act of March 3, 1849, was completed in 1852. The position for each end of the line and for several intermediate points was determined astronomically.[93]

This is the first State thus far noted having a boundary referred to the Washington meridian. Congress by act approved September 28, 1850,[94] ordered

> That hereafter the meridian of the observatory at Washington shall be adopted and used as the American meridian for all astronomic purposes and * * * Greenwich for nautical purposes.

This act was repealed August 22, 1912.[95]

The meridian passing through the center of the dome of the old Naval Observatory at Washington, on the grounds now occupied by the Naval Hospital, was the line referred to, which is 5 hours 8 minutes 12.15 seconds or 77° 03′ 02.3″ west of Greenwich. There is therefore a difference of 03′ 02.3″ of longitude between even degrees of the two meridians, Washington and Greenwich. The linear value of this interval varies with the latitude: For southern Kansas (latitude 37°) it is 2.8 miles; for southern New Mexico it is 3 miles; for northern Montana it is 2.3 miles. The center of the clock house of the present Naval Observatory is 77° 03′ 56.7″ (astronomic) west of Greenwich.

MINNESOTA

The Territory of Minnesota was organized on March 3, 1849. It comprised the portion of the former Territory of Iowa outside the limits of the present State of Iowa and extended east to the west boundary line of Wisconsin. (See fig. 17.) The terms of the act creating this Territory, so far as they relate to its boundary, are as follows:[96]

> all that part of the territory of the United States which lies within the following limits, to wit: Beginning in the Mississippi River, at the point where the line of forty-three degrees and thirty minutes of north latitude crosses the same; thence running due west on said line, which is the northern boundary of the State of Iowa, to the northwest corner of the said State of Iowa; thence southerly along the western boundary of said State to the point where said boundary strikes the Missouri River; thence up the middle of the main channel of the Missouri River to the mouth of the White-earth River; thence up the middle of the main channel of the White-earth River to the boundary line between the possessions of the United States and Great Britain; thence east and south of east along the boundary line between the possessions of the United

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[93] For an illustrated description of the survey of this line, see Annals of Iowa, January, 1929, pp. 483–503.

[94] 9 Stat. L. 515.

[95] 37 Stat. L. 342.

[96] 9 Stat. L. 403.

States and Great Britain to Lake Superior; thence in a straight line to the northernmost point of the State of Wisconsin in Lake Superior; thence along the western boundary line of said State of Wisconsin to the Mississippi River; thence down the main channel of said river to the place of beginning.

Minnesota was admitted as a State on May 11, 1858, with the same boundaries that it has at present.[97] These are given in the enabling act, as follows:[98]

> Beginning at the point in the center of the main channel of the Red River of the North, where the boundary line between the United States and the British Possessions crosses the same; thence up the main channel of said river to that of the Boix des Sioux River; thence [up] the main channel of said river to Lake Travers; thence up the center of said lake to the southern extremity thereof; thence in a direct line to the head of Big Stone Lake; thence through its center to its outlet; thence by a due south line to the north line of the State of Iowa; thence east along the northern boundary of said State to the main channel of the Mississippi River; thence up the main channel of said river, and following the boundary line of the State of Wisconsin, until the same intersects the Saint Louis River; thence down said river to and through Lake Superior, on the boundary line of Wisconsin and Michigan, until it intersects the dividing line between the United States and the British Possessions; thence up Pigeon River, and following said dividing line, to the place of beginning.

The western boundary line from the Big Sioux River to the Minnesota River was surveyed and marked in 1859–60 under the General Land Office. (See p. 23 for the survey of the northern boundary, p. 200 for the survey of the eastern boundary, and p. 206 for the survey of the southern boundary.)

The western boundary of Minnesota from Lake Traverse to Big Stone Lake was meandered, and the line from Big Stone Lake to the Iowa Line, a distance of 124 miles 5.23 chains was surveyed and marked in 1859 under the General Land Office.[99]

North of the 49th parallel and separated from the main part of Minnesota by the Lake of the Woods is a land area of nearly 124 square miles,[1] including a number of small islands, which became United States territory by the treaties of 1783 and 1818. (See pp. 8, 13.) The inclusion of this area in the United States resulted from the use of inaccurate maps by the treaty makers and has been described as a "politico-geographical curiosity of a boundary that a glance at the map will show, that no one could have foreseen, and that would be inexplicable without some knowledge of the steps in the process by which it was brought about."[2]

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[97] 11 Stat. L. 285.

[98] 11 Stat. L. 166.

[99] See Winchell, A. N., Minnesota's eastern, southern, and western boundaries: Minnesota Hist. Coll., vol. 10, 1905.

[1] This area as given on General Land Office township plats amounts to 123.87 square miles.

[2] International Joint Comm., Lake of the Woods references final report, p. 140, Washington, 1917.

NORTH DAKOTA AND SOUTH DAKOTA

The Territory of Dakota was organized on March 2, 1861, from parts of Minnesota and Nebraska Territories. (See figs. 19 and 20.) The following extract from the act of organization defines its original limits:[3]

> all that part of the territory of the United States included within the following limits, namely: commencing at a point in the main channel of the Red River of the North where the forty-ninth degree of north latitude crosses the same; thence up the main channel of the same and along the boundary of the State of Minnesota to Big Stone Lake; thence along the boundary line of the said State of Minnesota, to the Iowa line; thence along the boundary line of the State of Iowa to the point of intersection between the Big Sioux and Missouri rivers; thence up the Missouri river, and along the boundary line of the Territory of Nebraska to the mouth of the Niobrara or Running Water river; thence following up the same, in the middle of the main channel thereof, to the mouth of the Keha Paha or Turtle Hill river; thence up said river to the forty-third parallel of north latitude; thence due west to the present boundary of the Territory of Washington; thence along the boundary line of Washington Territory, to the forty-ninth degree of north latitude; thence east along said forty-ninth degree of north latitude to the place of beginning, be, and the same is hereby, organized into a temporary government by the name of the Territory of Dakota.

In 1863 the Territory of Idaho was formed, its area having been taken from Washington, Dakota, and Nebraska. (See Idaho, p. 237.)

In 1864, in the act creating Montana Territory, the area described in the following paragraph was temporarily restored to the jurisdiction of Dakota.[4]

> That, until congress shall otherwise direct, all that part of the Territory of Idaho included within the following boundaries, to wit: Commencing at a point formed by the intersection of the thirty-third degree of longitude west from Washington with the forty-first degree of north latitude; thence along said thirty-third degree of longitude to the crest of the Rocky Mountains; thence northward along the said crest of the Rocky Mountains to its intersection with the forty-fourth degree and thirty minutes of north latitude; thence eastward along said forty-fourth degree thirty minutes north latitude to the thirty-fourth degree of longitude west from Washington; thence northward along said thirty-fourth degree of longitude to its intersection with the forty-fifth degree north latitude; thence eastward along said forty-fifth degree of north latitude to its intersection with the twenty-seventh degree of longitude west from Washington; thence south along said twenty-seventh degree of longitude west from Washington to the forty-first degree north latitude; thence west along said forty-first degree of latitude to the place of beginning, shall be, and is hereby, incorporated temporarily into and made part of the Territory of Dakota.

All but a small part of this area was included in the Territory of Wyoming in 1868.

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[3] 12 Stat. L. 239.

[4] 13 Stat. L. 92.

In 1870 and 1882 small areas were transferred to Nebraska. (See p. 212.) In 1873 an area of about 2 square miles was transferred to Montana. (See p. 220.)

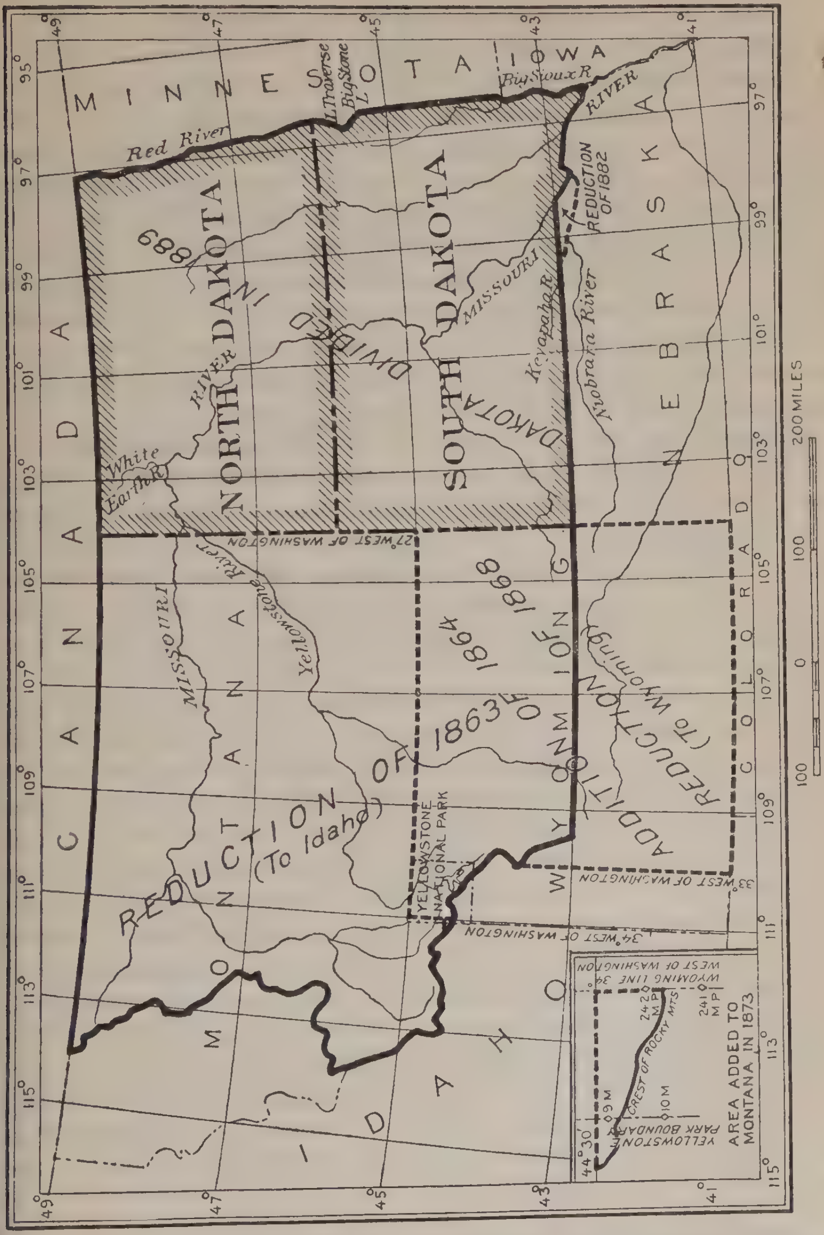
CANADA
MINNESOTA
IOWA
NEBRASKA
NORTH DAKOTA
SOUTH DAKOTA
MONTANA
WYOMING
IDAHO
COLORADO
Red River
Big Sioux R.
L.Traverse
Big Stone L.
RIVER
MISSOURI
Keyapaha R.
Niobrara River
White Earth R.
RIVER
Yellowstone River
MISSOURI
DAKOTA DIVIDED IN 1889
REDUCTION OF 1882
REDUCTION OF 1863 (To Idaho)
ADDITION OF 1864 1868
REDUCTION (To Wyoming)
YELLOWSTONE NATIONAL PARK
27° WEST OF WASHINGTON
33° WEST OF WASHINGTON
34° WEST OF WASHINGTON
WYOMING LINE 34° WEST OF WASHINGTON
242 MP
241 MP
CREST OF ROCKY MTS
9 M
10 M
YELLOWSTONE PARK BOUNDARY
44°30'
AREA ADDED TO MONTANA IN 1873
100 0 100 200 MILES
49° 47° 45° 43° 41°
95° 97° 99° 101° 103° 105° 107° 109° 111° 113° 115°

FIGURE 19.—Historical diagram of North Dakota and South Dakota

By the enabling act of February 22, 1889, the Territory of Dakota was divided into two parts, North Dakota and South Dakota:[5]

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[5] 25 Stat. L. 676.

> The area comprising the Territory of Dakota shall * * * be divided on the line of the seventh standard parallel produced due west to the western boundary of said Territory;

Each part, having adopted a constitution, was declared admitted as a State by presidential proclamation, dated November 2, 1889.

The boundary line between North and South Dakota, which is the seventh standard parallel north, of the public-land survey, was surveyed and marked in 1891–92. The marks are placed at each half mile and are substantial cut-stone posts 7 feet long by 10 inches square at top, set 3½ feet in the ground. The initials of the States are cut on the north and south sides, and the mile numbers on the east. The first mark was placed 9 chains west of the Bois des Sioux River bed. The measured distance to the east bank of the Missouri was 190 miles 8.25 chains. At a distance of 360 miles 45.35 chains the east boundary of Montana was intersected at a point 48.35 chains north of its sixty-fifth milepost. The Montana line at this place was found to bear 1° 01′ 30″ to the west.

Boundary post No. 333, which is near the west end of this line, is in latitude 45° 56′ 43.39″ and longitude 103° 28′ 21.44″.[6] Where the Chicago & Northwestern Railway crosses this boundary the latitude is 45° 56′ 07.7″ and the longitude 98° 07′ 42.1″. Near the east end of the line the latitude of a point was found to be 45° 56′ 09.7″.[7] The northeast corner of North Dakota, which is in the middle of the Red River where it crosses the 49th parallel boundary, is in longitude 97° 13′ 42.58″.

The west boundary of South Dakota between latitudes 43° and 45° was surveyed in 1877, commencing at a post set in 1869 for the northwest corner of Nebraska. That part of the boundary north of latitude 45° was surveyed in 1885. (See p. 221.) The entire west boundary of the State was resurveyed in 1904 and marked with 6-foot stone posts at each mile except from the 39th to the 104th, inclusive, which were marked with iron posts for the Black Hills National Forest. The measured distance to the northeast corner of Wyoming was 139 miles 8.78 chains, and to the northwest corner of South Dakota 204 miles 48.26 chains. From the northeast corner of Wyoming to the southeast corner of Montana the line runs east a distance of 70.68 chains. This jog in the State line is due to errors in the location of the 27th meridian as determined from two widely separated stations; the position brought down from the north[8] is 41.6″ too far east, and that brought up from the south[9] is 23.3″ too far west.

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[6] U. S. Coast and Geodetic Survey Special Pub. 19, p. 93, 1914.

[7] U. S. Geol. Survey Bull. 644, p. 296, 1916.

[8] See Montana, east boundary, p. 221.

[9] See Nebraska, 41st parallel boundary, p. 214.

Milestone No. 4 on the Wyoming-South Dakota line was located by the United States Coast and Geodetic Survey[10] in 1912 in latitude 43° 03′ 30.99″ and longitude 104° 03′ 09.85″.

NEBRASKA

The Territory of Nebraska was formed on May 30, 1854, from the northwestern part of Missouri Territory. Its original limits are defined as follows in the act of organization[11] (see fig. 20):

> beginning at a point in the Missouri River where the fortieth parallel of north latitude crosses the same; thence west on said parallel to the east boundary of the Territory of Utah, on the summit of the Rocky Mountains; thence on said summit northward to the forty-ninth parallel of north latitude; thence east on said parallel to the western boundary of the territory of Minnesota; thence southward on said boundary to the Missouri River; thence down the main channel of said river to the place of beginning, be, and the same is hereby, created into a temporary government by the name of the Territory of Nebraska.

This area was reduced in 1861 by the formation of the Territories of Colorado and Dakota and further reduced in 1863 by the formation of the Territory of Idaho. (See Colorado, p. 224, Dakota, p. 208, and Idaho, p. 237.)

In 1861, in the act creating the Territory of Dakota, a small area was added to the west end of Nebraska. The following is the text of the act making this addition:[12]

> That, until Congress shall otherwise direct, that portion of the Territories of Utah and Washington between the forty-first and forty-third degrees of north latitude, and east of the thirty-third meridian of longitude west from Washington, shall be, and is hereby, incorporated into and made a part of the Territory of Nebraska.

The act for the admission of Nebraska to the Union was passed by Congress February 9, 1867, over a presidential veto, and, the conditions having been accepted by the people, statehood was declared in effect by proclamation of the President dated March 1, 1867.[13]

The limits of the State are defined as follows in the enabling act, approved April 19, 1864.[14]

> That the said state of Nebraska shall consist of all the territory included within the following boundaries, to wit: Commencing at a point formed by the intersection of the western boundary of the state of Missouri with the fortieth degree of north latitude; extending thence due west along said fortieth degree of north latitude to a point formed by its intersection with the twenty-fifth degree of longitude west from Washington; thence north along said twenty-fifth degree of longitude to a point formed by its intersection with the forty-first degree of north latitude; thence west along said forty-first degree of north latitude to a point formed by its intersection with the twenty-seventh degree of longitude west from Washington; thence north along said twenty-seventh

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[10] Special Pub. 19, p. 93, 1914.

[11] 10 Stat. L. 277.

[12] 12 Stat. L. 244.

[13] 14 Stat. L. 391, 821.

[14] 13 Stat. L. 47.

degree of west longitude to a point formed by its intersection with the forty-third degree of north latitude; thence east along said forty-third degree of north latitude to the Reya Paha [Keyapaha] river; thence down the middle of the channel of said river, with its meanderings, to its junction with the Niobrara river; thence down the middle of the channel of said Niobrara river, and following the meanderings thereof, to its junction with the Missouri river; thence down the middle of the channel of said Missouri river, and following the meanderings thereof, to the place of beginning.

As the result of a sudden change in the course of the Missouri an area of about 5 square miles, which had previously been a part of Dakota Territory, was left on the Nebraska side of the river a short distance above Sioux City, Iowa. (See fig. 20.) To avoid future complications, this tract was given to Nebraska by an act approved April 28, 1870, "to redefine a portion of the boundary line between the State of Nebraska and the Territory of Dakota," as follows:[15]

That so soon as the State of Nebraska, through her legislature, has given her consent thereto, the centre of the main channel of the Missouri River shall be the boundary line between the State of Nebraska and the Territory of Dakota, between the following points, to wit: Commencing at a point in the centre of said main channel, north of the west line of section twenty four in township twenty nine north, of range eight east of the sixth principal meridian, and running along the same to a point west of the most northerly portion of fractional section seventeen, of said township twenty nine north, of range nine east of said meridian, in the State of Nebraska.

For plat showing the changes see General Land Office files, Nebraska township plats, volume 9. This change was approved by Nebraska by act of February 9, 1871.

In 1882 an act was passed transferring to this State from Dakota a small area lying between the Keyapaha River and the 43d parallel of latitude. The following is an extract from this act.[16]

That the northern boundary of the State of Nebraska shall be, and hereby is, subject to the provisions hereinafter contained, extended so as to include all that portion of the Territory of Dakota lying south of the forty-third parallel of north latitude and east of the Keyapaha River and west of the main channel of the Missouri River.

By act of March 1, 1905, Congress approved the compact between Nebraska and South Dakota, fixing the boundary south of Union County, S. Dak., in the middle of the main channel of the Missouri River as it then existed.

The north boundary of Nebraska from the middle of the Keyapaha westward was surveyed in 1874, after the proper position for the 43d parallel had been found from an astronomic station near the east end of the line. In 1893 this line was retraced, and 7-foot cut-stone posts were placed at each mile and half-mile corner on the line as established in 1874. The stone set in 1869 for the northwest corner of the State was also replaced by one of the 7-foot posts. The reported length of this line was 224 miles 12.13 chains.

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[15] 16 Stat. L. 93.

[16] 22 Stat. L. 35.

The United States Geological Survey, in 1891, located milepost 184½ in latitude 43° 00′ 01.8″, longitude 103° 16′ 25.5″, and the United States Coast and Geodetic Survey, in 1912, located milepost 222½ in latitude 43° 00′ 06.54″, longitude 104° 00′ 02.46″. Both positions refer to North American datum.

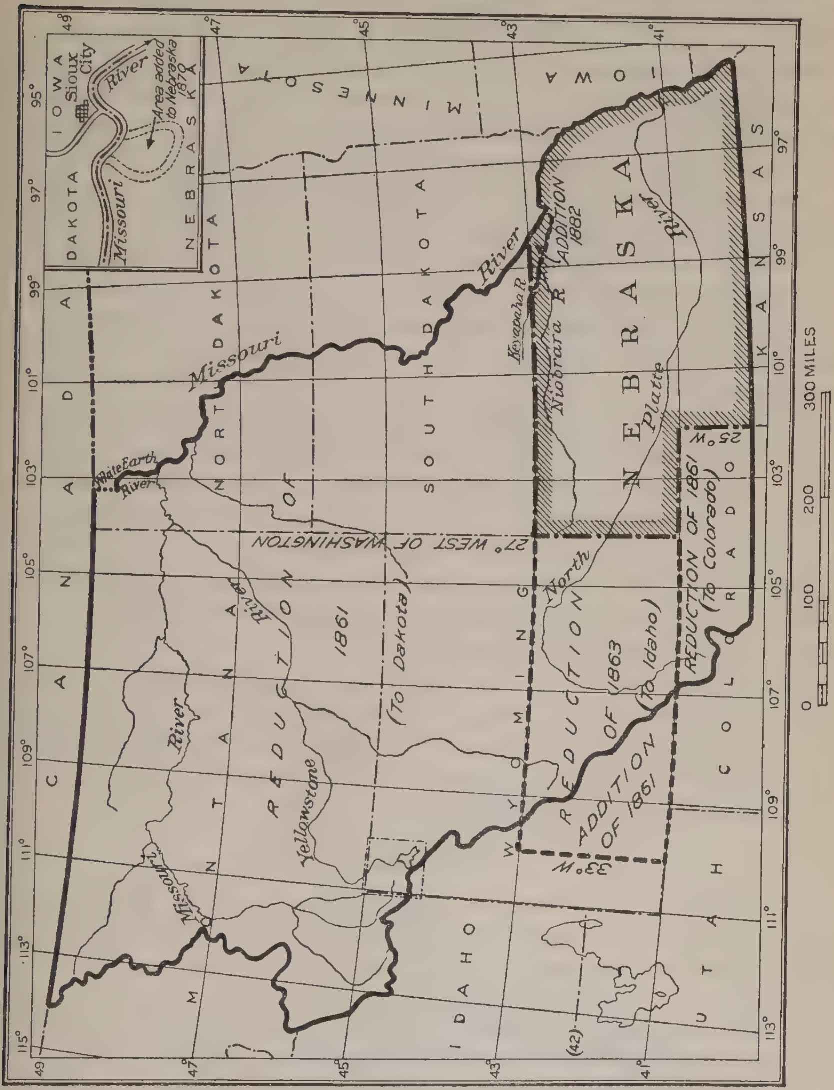
IOWA
Sioux City
River
Area added to Nebraska 1870
DAKOTA
Missouri
NEBRASKA
MINNESOTA
NORTH DAKOTA
SOUTH DAKOTA
Missouri River
Keyapaha R.
ADDITION 1882
Niobrara R.
NEBRASKA
Platte River
KANSAS
White Earth River
27° WEST OF WASHINGTON
REDUCTION OF 1861 (To Dakota)
REDUCTION OF 1861 (To Colorado)
25° W
COLORADO
CANADA
MONTANA
River
Yellowstone
Missouri
WYOMING
North Platte River
REDUCTION OF 1863 (To Idaho)
ADDITION OF 1861
33° W
IDAHO
UTAH
(42)
0 100 200 300 MILES

FIGURE 20.—Historical diagram of Nebraska

In 1893 the north boundary from the Keyapaha River eastward was surveyed and marked with 7-foot cut-stone posts, and the distance was given as 57 miles 72.70 chains to a terminal mark 72.82 chains from high-water mark on the west bank of the Missouri River.

The west boundary of Nebraska, including the part along the 41st parallel, was surveyed in 1869 under the direction of the General Land Office. The initial astronomic station was at Julesburg, Colo., the position of which was taken as latitude 40° 59′ 01.56″ and longitude 25° 18′ 30.90″ west of Washington. From this station a line was measured due north 89.65 chains to the computed position of the 41st parallel, thence due east 16 miles 10.47 chains to the computed position of the 25th degree of longitude west from Washington, where a 6-foot limestone corner post was established. From this point a random line was run due south to the calculated position of the 40th parallel as determined by astronomic observations. At the point thus found a limestone post 6 feet long by 1 foot square at top, appropriately marked, was set in a mound of earth, from which the line was run north, and marks (most of them wooden posts) were set for each mile, a distance of 68 miles 79.59 chains to the 41st parallel mark.

From the Julesburg meridian mark on the 41st parallel the line was run west to the intersection with the 27th meridian, a total distance on the parallel of 104 miles 72.07 chains. The correct position of the 27th meridian was found from a telegraphic determination of longitude at a station 8 miles 49.45 chains east. From the intersection of the 41st parallel and the 27th meridian, where a 6-foot stone post was set, the line was run northward on the 27th meridian to the northwest corner of Nebraska.

The Nebraska-Wyoming line was retraced in 1908 and re-marked with granite posts 6 feet long and 10 inches square at the top, each set 3 feet in the ground, and marked "WYO" on the west, "NEB" on the east, and the mile number on the south. The measured length of this line was 139 miles 22.43 chains.

KANSAS

The Territory of Kansas was organized on May 30, 1854, from a part of Missouri Territory. (See fig. 18.) The following clause from the act of organization defines its limits:[17]

> all that part of the Territory of the United States included within the following limits, except such portions thereof as are hereinafter expressly exempted from the operations of this act, to wit: beginning at a point on the western boundary of the State of Missouri, where the thirty-seventh parallel of north latitude crosses the same; thence west on said parallel to the eastern boundary of New Mexico; thence north on said boundary to latitude thirty-eight; thence following said boundary westward to the east boundary of the Territory of Utah, on the summit of the Rocky Mountains; thence northward on said summit to the fortieth parallel of latitude; thence east on said

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[17] 10 Stat. L. 283. The excepted parts were Indian lands.

parallel to the western boundary of the State of Missouri; thence south with the western boundary of said State to the place of beginning, be, and the same is hereby, created into a temporary government by the name of the Territory of Kansas.

Kansas was admitted into the Union on January 29, 1861, with its present boundaries, which are thus defined in the enabling act:[18]

> the said State shall consist of all the territory included within the following boundaries, to wit: beginning at a point on the western boundary of the State of Missouri, where the thirty-seventh parallel of north latitude crosses the same; thence west on said parallel to the twenty-fifth meridian of longitude west from Washington; thence north on said meridian to the fortieth parallel of latitude; thence east on said parallel to the western boundary of the State of Missouri; thence south with the western boundary of said State to the place of beginning.

The part of Kansas Territory west of the 25th Washington meridian detached by this act was made a part of the Territory of Colorado 30 days later.

The southern boundary of Kansas was surveyed in 1857. The initial point on the 37th parallel was found from astronomic observations on the Kansas-Missouri boundary line in longitude 94° 40′ 26.3″ and was checked by observations at 10 other astronomic stations. Marks were left at irregular intervals.

From the 166th mile to the 226th mile this line was resurveyed in 1872 and from the 207th mile to the 268th mile in 1873 by the General Land Office.

Two boundary stones were located by triangulation in 1902 on the Kansas-Oklahoma line—No. 160, a sandstone post 5 by 12 by 20 inches, projecting about 9 inches above ground, marked "160" on top, "K" on the north side, and "I T" on the south side, in latitude 36° 59′ 54.98″, longitude 97° 54′ 01.98″; and No. 163, a stone marked as above described except that "163" is the number on top, in latitude 36° 59′ 54.73″, longitude 97° 57′ 16.45″.[19]

The United States Geological Survey[20] in 1906 determined the position of the southeast corner of Kansas as latitude 36° 59′ 55.2″, longitude 94° 37′ 03.3″.

The survey of the boundary between Kansas and Nebraska, which is also the base line for land surveys in the two States, was begun in 18[illegible], and 108 miles of line west of the Missouri River was run and [illegible]; the marks with few exceptions were small wooden posts or [illegible] The initial position for the 40th parallel was found by calculation and measurement from an astronomic station (latitude 40° 01′ 10.3″) on the east side of the Missouri about 2½ miles southeast of the mouth of the Nemaha. An initial monument of cast iron for this line was set up in 1855 at a point 52.55 chains west of the right bank of the Missouri, the marks on which are "NEBRASKA" on the north, "1854" on the east, "40° N LAT" on the west, and "KANSAS" on the south. This line was resurveyed and re-marked in 1855–56, and the marks on the former line were destroyed. From the 108th mile the line was extended west to the Rocky Mountains in 1858–59 as a base of the land survey.[21]

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[18] 12 Stat. L. 126.

[19] U. S. Coast and Geodetic Survey Rept. for 1903, p. 885.

[20] U. S. Geol. Survey Bull. 440, p. 490, 1910.

For the eastern boundary, see Missouri (p. 203).

The western boundary of Kansas was surveyed in 1872 and from the 174th milepost south to the Oklahoma line was reestablished in 1908 by the General Land Office. Most of the marks left were small stones. Several marks on this line have been connected with triangulation stations, giving the following results:

Boundary mark	Latitude			Longitude		
	°	′	″	°	′	″
[a] 68	39	00	22.6	102	02	45.1
[a] 73½	38	55	31.0	102	02	43.4
[a] 78	38	51	30.1	102	02	42.5
[a] 83	38	47	09.3	102	02	41.8
[b] 130	38	06	01.5	102	02	41.5
[b] 140	37	57	18.0	102	02	38.4

[a] U. S. Coast and Geodetic Survey Rept. for 1902, p. 253.
[b] U. S. Geol. Survey Eighteenth Ann. Rept., pt. 1, p. 184.

OKLAHOMA

The Territory of Oklahoma was organized under the act of May 2, 1890 from the western part of the Indian Territory. (See pp. 71–72 and fig. 21.) Its limits as originally constituted were set forth in the act as follows:[22]

> That all that portion of the United States now known as the Indian Territory, except so much of the same as is actually occupied by the five civilized tribes, and the Indian tribes within the Quapaw Indian Agency, and except the unoccupied part of the Cherokee outlet, together with that portion of the United States known as the Public Land Strip,[23] is hereby erected into temporary government by the name of the Territory of Oklahoma. The portion of the Indian Territory included in said Territory of Oklahoma is bounded by a line drawn as follows: Commencing at a point where the ninety-eighth meridian crosses the Red River; thence by said meridian to the point where it crosses the Canadian River; thence along said river to the west line of the Seminole country; thence along said line to the north fork of the Canadian River; thence down said river to the west line of the Creek country, thence along said line to the northwest corner of the Creek country; thence along the north line of the Creek country, to the ninety-sixth meridian; thence northward by said meridian to the southern boundary line of Kansas; thence west along said line to the Arkansas River; thence down said river to the north line of the land occupied by the Ponca tribe of Indians, from which point the line runs

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[21] See General Land Office files, Kansas exterior plats, vol. 4, p. 2.
[22] 26 Stat. L. 81–82.
[23] Donaldson, Thomas, op. cit., pp. 462, 1187.

> so as to include all the lands occupied by the Ponca, Tonkawa, Otoe, and Missouria, and the Pawnee tribes of Indians until it strikes the south line of the Cherokee Outlet, which it follows westward to the east line of the State of Texas; thence by the boundary line of the State of Texas to the point of beginning; the Public Land Strip which is included in said Territory of Oklahoma is bounded east by the one hundredth meridian, south by Texas, west by New Mexico, north by Colorado and Kansas. Whenever the interest of the Cherokee Indians in the land known as the Cherokee outlet shall have been extinguished and the President shall make proclamation thereof, said outlet shall thereupon and without further legislation become a part of the Territory of Oklahoma. Any other lands within the Indian Territory not embraced within these boundries, shall hereafter become a part of the Territory of Oklahoma whenever the Indian nation or tribe owning such lands shall signify to the President of the United States in legal manner its assent that such lands shall so become a part of said Territory of Oklahoma, and the President shall thereupon make proclamation to that effect.

The Public Land Strip was a part of the land ceded to the United States by Texas that had not been included in Kansas or New Mexico. For many years this area (5,740 square miles) was popularly known as "No Man's Land." Its west boundary, which has been generally accepted as the Cimarron guide meridian as established by the General Land Office in 1881, is 34.25 miles in length. The latitude and longitude of the north end of this boundary, which is the northeast corner of New Mexico, are 37° 00′ 00.64″ and 103° 00′ 06.78″ (North American datum).

The United States Supreme Court having decreed that the area east of the 100th meridian and between the two main forks of the Red River did not belong to Texas (see pp. 171–172), Congress, on May 4, 1896, enacted [24]

> That, the portion of the Territory of Oklahoma bounded by the North Fork of the Red River and the State of Texas, heretofore known as Greer County, Texas, be and the same is hereby established as Greer County, Oklahoma.

The 98th meridian, which was then part of the west boundary of Indian Territory, was marked by the Geological Survey in 1899 with iron posts set in concrete.

The Cherokee Outlet originally comprised an area of more than 12,000 square miles south of the south boundary of Kansas, west of the 96th meridian, north of an east-west line through the mouth of the Cimarron River, and extending west to the 100th meridian, which was reserved for the use of Indians while traveling to visit their friends in the West. The rights of the Indians in this area were extinguished by treaty dated December 19, 1891, ratified by Congress March 3, 1893,[25] and proclaimed by the President August 19, 1893, effective at 12 o'clock noon of the 16th of September following. This area thereby became a part of the Territory of Oklahoma in

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[24] 29 Stat. L. 113.

[25] 27 Stat. L. 640.

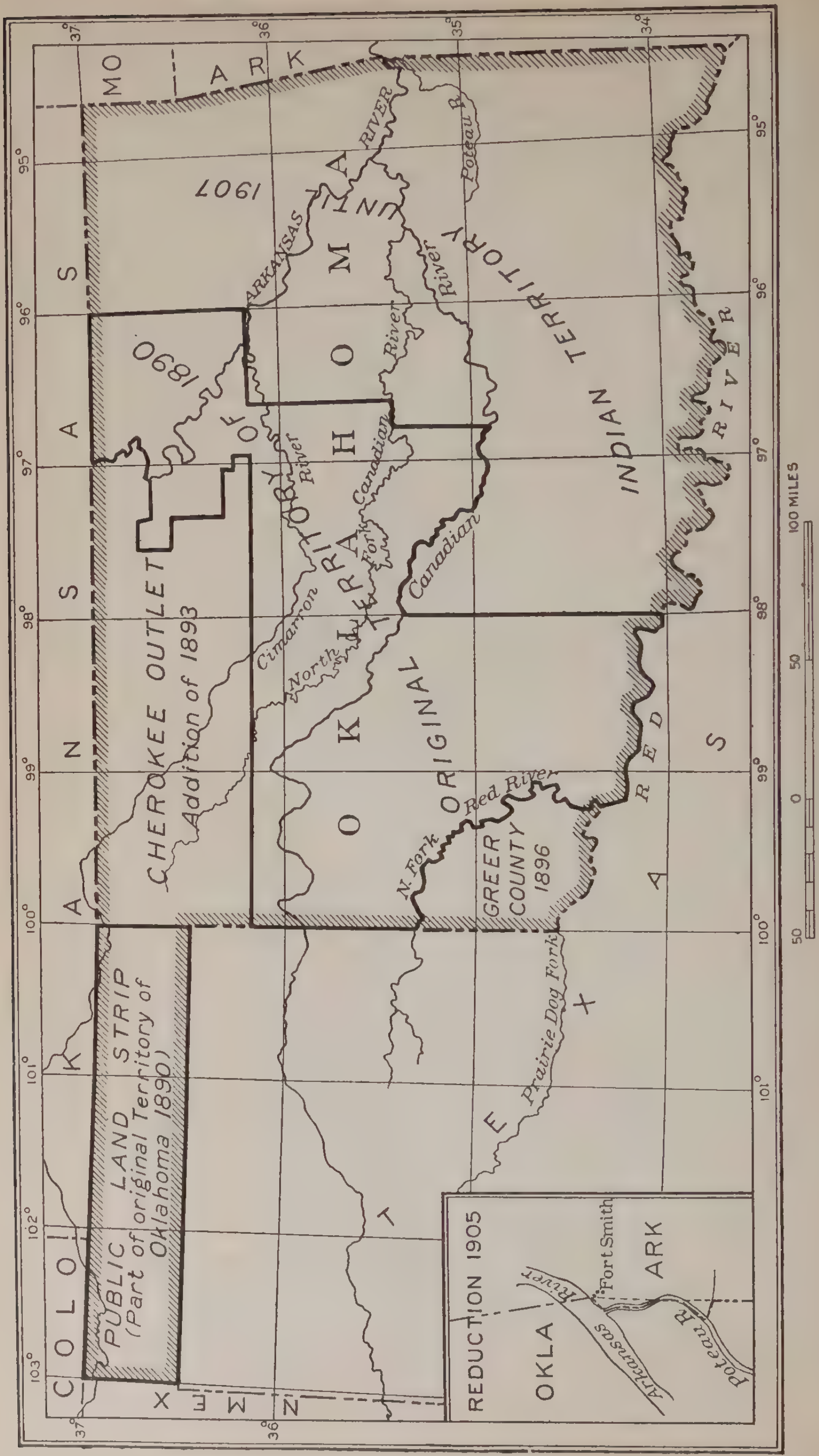
K A N S A S
MO
A R K
COLO
N E W M E X I C O
T E X A S
A R K A N S A S
OKLAHOMA
1907
1890
CHEROKEE OUTLET
Addition of 1893
PUBLIC LAND STRIP
(Part of original Territory of Oklahoma 1890)
ORIGINAL TERRITORY OF OKLAHOMA
INDIAN TERRITORY
GREER COUNTY
1896
ARKANSAS RIVER
Poteau R.
River
River
Cimarron River
North Fork
Canadian
Canadian
Fork
N. Fork
Red River
RED RIVER
Prairie Dog Fork
REDUCTION 1905
OKLA
ARK
Fort Smith
Arkansas River
Poteau R.
37°
36°
35°
34°
95°
96°
97°
98°
99°
100°
101°
102°
103°
50
0
50
100 MILES

FIGURE 21.—Historical diagram of Oklahoma

accordance with the act of May 2, 1890, and was open to settlers. The Cherokee Outlet was not the same as the Cherokee strip. The Cherokee strip was a part of the Cherokee country about 2½ miles wide just north of the 37th parallel, now a part of Kansas.

On June 16, 1906, an enabling act for the admission of Oklahoma as a State was passed by Congress,[26] the new State to consist of

> all that part of the area of the United States now constituting the Territory of Oklahoma and the Indian Territory as at present described.

The bounds of the Indian Territory, as defined in the act of March 1, 1889, were as follows: [27]

> North by the State of Kansas, east by the States of Missouri and Arkansas, south by the State of Texas, and west by the State of Texas and the Territory of New Mexico.

The people of the two Territories having adopted a constitution, the President, by proclamation dated November 16, 1907, declared the admission to statehood complete.[28]

For descriptions of the boundaries of the State of Oklahoma as now marked see Arkansas, pages 178, 180; Missouri, page 203; Texas, pages 172–175; Kansas, page 215; and Colorado, page 225.

A book by Roy Gittinger, published by the University of California in 1917, entitled "The formation of the State of Oklahoma," contains many references to boundaries as well as a history of the changes in the territory from 1803 to 1906.

An interesting set of diagrams illustrating various stages in the change of the Oklahoma area from Indian ownership to statehood was prepared by George Pamley and printed by the Webb Publishing Co., Oklahoma City, in 1917.

MONTANA

The Territory of Montana was organized by act of May 26, 1864, from a portion of Idaho. Its limits (figs. 19 and 26), which have been changed but slightly, are given as follows in the organizing act: [29]

> That all that part of the territory of the United States included within the limits, to wit: Commencing at a point formed by the intersection of the twenty-seventh degree of longitude west from Washington with the forty-fifth degree of north latitude; thence due west on said forty-fifth degree of latitude to a point formed by its intersection with the thirty-fourth degree of longitude west from Washington; thence due south along said thirty-fourth degree of longitude to its intersection with the forty-fourth degree and thirty minutes of north latitude; thence due west along said forty-fourth degree and thirty minutes of north latitude to a point formed by its intersection with the crest of the Rocky Mountains; thence following the crest of the Rocky Mountains northward till its intersection with the Bitter Root Mountains; thence northward along the crest of said Bitter Root Mountains to its intersection with the thirty-

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[26] 34 Stat. L. 267.

[27] 25 Stat. L. 783.

[28] 35 Stat. L. 2160.

[29] 13 Stat. L. 86.

ninth degree of longitude west from Washington; thence along said thirty-ninth degree of longitude northward to the boundary line of the British possessions; thence eastward along said boundary line to the twenty-seventh degree of longitude west from Washington; thence southward along said twenty-seventh degree of longitude to the place of beginning, be, and the same is hereby, created into a temporary government by the name of the Territory of Montana.

This act took from Idaho an area bounded in part on the south by the 45th parallel and on the west by the Bitterroot Mountains. The creation of Wyoming Territory in 1868 took from Dakota Territory the greater part of the area that had been restored to it by the Montana act, which extended west to the Continental Divide and north to the point where the divide intersected the parallel of 44° 30′, but left a triangular area of about 1½ square miles west of longitude 34°, south of latitude 44° 30′, and extending west to the Continental Divide that still belonged to Dakota. This was given to Montana by the act of 1873, which described it as follows (see fig. 19):[30]

That all that portion of Dakota Territory lying west of the one hundred and eleventh meridian of longitude which, by an erroneous definition of the boundaries of said Territory by a former act of Congress, remains detached and distant from Dakota proper some two hundred miles, be, and the same is hereby, attached to the adjoining territory of Montana.

This act was evidently based on inadequate geographic information relative to the position of the Continental Divide. According to the most reliable maps now available (the U. S. Geological Survey maps of the Shoshone and Grand Teton quadrangles, Wyo.) the Continental Divide crosses the 33d meridian west of Washington near the 44th parallel of latitude; running northward the divide intersects the parallel of 44° 30′ at points about 21 and 17 miles east of the 34th meridian and again 2 miles west of that meridian; the last-named intersection is evidently the one referred to in the act. The act should have described the area as being west of the 34th meridian west of Washington instead of west of the 111th meridian, for the Greenwich meridian was not mentioned in the former act.

The enabling act, which included also provisions for the admission of North Dakota, South Dakota, and Washington, fixed their boundaries "as at present described."[31]

The presidential proclamation announcing the admission of Montana as a State was dated November 8, 1889.

The south boundary of Montana was surveyed and marked in 1879–80, under the General Land Office.

That portion of the west boundary between the crest of the Bitterroot Mountains and the Canada line was resurveyed and re-marked in 1898–99 by the United States Geological Survey.[32]

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[30] 17 Stat. L. 464.

[31] 25 Stat. L. 676.

[32] For a detailed report of this work see U. S. Geol. Survey Bull. 170, 1900.

The remainder of the western boundary was surveyed and marked by stone or 3-inch round iron posts in 1904–1906 under the General Land Office. The total measured length of the Idaho-Montana boundary line from the Canadian border to the Wyoming line is about 738 miles, of which the first 70.7 miles is the meridional line, the next 355 miles is along the crest of the Bitterroot Mountains, and the remaining 312 miles along the Continental Divide. The west boundary of the Yellowstone National Park crosses this line about 2⅛ miles west of the Wyoming line.

For reference to the survey of the northern boundary see page 23.

The survey of the east boundary of Montana on the 27th meridian west of Washington was undertaken in 1885; the initial position had been found by measurement from an astronomic station on the Northern Pacific Railway 6 miles 28.51 chains to the west, where an exchange of time signals had been made by telegraph. From the point thus found a random line was run south to the 45th parallel. The mark at the northeast corner of Wyoming on this parallel, as established in 1880, was reported to be 70.68 chains west of the 27th meridian as fixed by the random line. A point for the intersection of the 45th parallel and the 27th meridian (the southeast corner of Montana) was marked by a stone post. Both these corner marks were replaced in 1904 by 6-foot cut-stone posts. See page 222 for the geographic position of the Wyoming corner.

From the point marked as the southeast corner of Montana the line was run north to the 49th parallel boundary, a measured distance of 276 miles 27.80 chains. The Northern Pacific Railway was crossed at 133 miles 63 chains, the Yellowstone River between mileposts 195 and 196, and the Missouri River between mileposts 207 and 208. Most of the marks on this line were wooden posts, many of which have since been destroyed. The part from the 193d to the 218th milepost was retraced in 1901, and the posts were found to be poorly alined, varying as much as 50 minutes to the east or west for a single mile.

The geographic position of the southeast corner of Montana is latitude 44° 59′ 53.74″ and longitude 104° 02′ 20.68″.[33] Farther north (at latitude 47° 12′ 42.0″) there is an accurately located boundary mark, the longitude of which is 104° 02′ 39.4″. This mark is an old oak post.[34] The longitude of the intersection of the east boundary line with the northern boundary of the United States is 104° 02′ 47.53″.

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[33] U. S. Coast and Geodetic Survey Special Pub. 19, p. 93, 1914.

[34] Idem, p. 94.

WYOMING

Wyoming was organized as a Territory on July 25, 1868, from an area previously included in the Territories of Dakota, Idaho, and Utah. Its limits, which are the same as originally established, are defined in the following clause from the act creating it:[35]

> That all that part of the United States described as follows: Commencing at the intersection of the twenty-seventh meridian of longitude west from Washington with the forty-fifth degree of north latitude, and running thence west to the thirty-fourth meridian of west longitude, thence south to the forty-first degree of north latitude, thence east to the twenty-seventh meridian of west longitude, and thence north to the place of beginning, be, and the same is hereby, organized into a temporary government by the name of the Territory of Wyoming.

Wyoming was admitted as a State by act of July 10, 1890, with boundaries as above described (see fig. 19), but it was

> *Provided*, That nothing in this act contained shall repeal or affect any act of Congress relating to the Yellowstone National Park, or the reservation of the park as now defined, or as may be hereafter defined or extended or the power of the United States over it;[36]

Wyoming has the right to serve criminal or civil writs in its portion of the park, but otherwise the United States has exclusive jurisdiction and control over it.[37] The original boundaries of the park were given in the act establishing it, dated March 1, 1872.[38] Extensions were made by act approved March 1, 1929.

The north boundary of Wyoming was surveyed in 1879–80 under the General Land Office. Beginning at a post set in 1874 for the northwest corner of the State, the line was run eastward, checked by a number of observations for latitude, for a distance reported as 347 miles 43 chains. The marks were nearly all wooden posts in small mounds of earth, and a field examination of the positions made in 1881–82 by the United States Coast and Geodetic Survey showed numerous large errors in alinement, many of which were then corrected. The eastern terminus of this line was on the meridian of 27° west of Washington as marked in 1877. The mark left at this corner was replaced in 1904 by a 6-foot stone post, the geographic position of which is latitude 44° 59′ 52.00″ longitude 104° 03′ 25.62″.[39]

The survey of the south boundary of Wyoming was made under the direction of the General Land Office in 1873. Beginning at a mark established in 1869 for the intersection of the 41st parallel and the 27th meridian west of Washington, the line was run westward, checked by six astronomic determinations of latitude, to the computed location for the 34th meridian west of Washington. In order to find the proper position for this meridian an astronomic station was established at Evanston, Wyo., the longitude of which was found to be 35° 55′ 20.69″ west of Washington. From this point a line was run due south to a mark on the boundary and thence west 4 miles 4.54 chains, to a point where an 8-foot sandstone post, appropriately marked, was set 3 feet in the ground and surrounded by a pile of rocks. The measured length of the south boundary of Wyoming was found to be 367 miles 48.81 chains.

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[35] 15 Stat. L. 178.

[36] 26 Stat. L. 222.

[37] 26 Stat. L. 73.

[38] 17 Stat. L. 32.

[39] U. S. Coast and Geodetic Survey Special Pub. 19, p. 93, 1914.

Geographic positions on this boundary have been determined as follows: Boundary mark No. 44, a sandstone post projecting 4 feet above ground, stands about 11 miles west of south from Cheyenne, in latitude 40° 59′ 54.2″ and longitude 104° 53′ 33.6″. This is said to be the only permanent boundary mark for several miles in either direction.[40] Boundary mark No. 163, a cut-stone post 60 by 18 by 18 inches in size, was located by the Geological Survey in latitude 41° 00′ 11.8″, longitude 107° 09′ 20.4″.[41] The position of the stone that marks the southwest corner of Wyoming is latitude 40° 59′ 53.48″, longitude 111° 02′ 56.67″.[42] A considerable part of the south boundary of Wyoming has been retraced by the General Land Office in connection with the surveys of public lands.

The west boundary of Wyoming was surveyed and marked in 1874. Beginning at the mark of 1873 at the southwest corner of the State, the line runs due north for a measured distance of 277 miles 72.66 chains to a point where a 30-inch pine post 10 feet long was set 3 feet in the ground and surrounded by a mound of earth and stone. The position for the intersection with the south boundary of Idaho as marked in 1871 was 51.38 chains north of the 69-mile point and 55.70 chains west of the mark previously established for the initial point of the Utah-Idaho boundary survey.

COLORADO

A concerted attempt was made in 1858 to organize the "State of Jefferson," which was to include the present area of Colorado together with large areas now within the limits of Nebraska, Wyoming, and Utah; but by popular vote in 1859 it was decided to organize a Territorial government instead. A governor and a legislature were elected and held office until 1861, when the Territory of Colorado was established by act of Congress.[43]

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[40] Idem, pp. 92, 125.

[41] U. S. Geol. Survey Bull. 201, p. 93, 1902.

[42] U. S. Geol. Survey Bull. 181, p. 202, 1901.

[43] U. S. Geol. Survey Bull. 707, pp. 62–65, 1922. See also Paxson, F. L., The boundaries of Colorado: Colorado Univ. Studies, vol. 2, p. 92, Boulder, 1904; Smiley, J. C., History of Denver, ch. 32, Denver, 1901.

Colorado was organized as a Territory on February 28, 1861,[44] with the same boundaries as at present, being made up from parts of the Territories of Utah, New Mexico, Kansas, and Nebraska. (See figs. 18, 22 and 24.) The name given to this Territory in the bill as it passed the House was Idaho; but it was changed to Colorado in the Senate.

The boundaries were described in an enabling act, approved March 21, 1864, as follows:[45]

> That the said state of Colorado shall consist of all the territory included within the following boundaries, to wit: Commencing at a point formed by the intersection of the thirty-seventh degree of north latitude with the twenty-fifth degree of longitude west from Washington; extending thence due west along said thirty-seventh degree of north latitude to a point formed by its intersection with the thirty-second degree of longitude west from Washington; thence due north along said thirty-second degree of west longitude to a point formed by its intersection with the forty-first degree of north latitude; thence due east along said forty-first degree of north latitude to a point formed by its intersection with the twenty-fifth degree of longitude west from Washington; thence due south along said twenty-fifth degree of west longitude.

A constitution formed by a convention held in 1864 in accordance with this act was rejected by poplar vote; a second constitution formed by another convention in 1865 was accepted by a small majority. Congress at its next session passed an act for the admission of Colorado to statehood, but it was vetoed in May, 1866, by the President. The principal reasons given for this action were scanty population and the small majority resulting from the second vote (3,030 against 2,875). Furthermore, it was stated that the second voting was held without legal authority. Another act for the admission of Colorado was vetoed in 1867 for reasons similar to those previously given.[46]

A third enabling act, without change in boundaries, was approved March 3, 1875.[47] The conditions of the act having been complied with, the President by proclamation dated August 1, 1876, declared the admission complete.

For reference to the survey and marking of the east boundary see Kansas, page 216, and for the north boundary see Nebraska, page 214, and Wyoming, page 222.

The south boundary of Colorado as far west as the 103d meridian was surveyed in 1858–59, the terminal mark (the Macomb monument established in 1859) being a stone post 30 by 10 by 8 inches in a pile of rocks. This line was retraced by John J. Major in 1874. A survey of the boundary line between Colorado and New Mexico from the

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[44] 12 Stat. L. 172.

[45] 13 Stat. L. 33.

[46] 53d Cong., 2d sess., H. Misc. Doc. 210, pt. 6, pp. 413–416, 483, 489, 1897. See Thorpe, F. N., op. cit., vol. 1, p. 470.

[47] 18 Stat L., pt. 3, 474.

103d meridian westward was authorized by act of Congress approved March 2, 1867. This line was surveyed and marked in 1868 by E. N. Darling, United States surveyor, presumably on the 37th parallel of latitude, but subsequent investigations in the vicinity of Edith, Colo., showed that between the sixth and eighth astronomical monuments[48] (there were 11 in all) gross errors in alinement and measurement existed, there being an offset or jog of nearly half a mile in the vicinity of the 212th mile mark.

In order to locate the line where original marks were missing the State of Colorado, in 1901,[49] appropriated funds for the reestablishment of the Darling line between the sixth and eighth astronomical monuments. The act required that the field notes and plats be filed with the secretary of state of Colorado, to be accepted as conclusive evidence in all cases in Colorado courts in which this part of the southern boundary was in question. This work, done in 1901, by State authority alone, was not accepted or approved by Congress and was therefore not binding on New Mexico, which was then a Territory.

In 1902 Congress authorized the resurvey of the entire line between the State of Colorado and the Territories of New Mexico and Oklahoma.[50] This survey was executed by H. B. Carpenter in 1902–3, but the joint resolution passed by Congress for its acceptance as the legal boundary was vetoed by the President.[51] The Carpenter line differs materially from the Darling line, being considerably north of it in certain places and south of it in others. At the east end the Carpenter line is more than half a mile north of the southern boundary as surveyed in 1858. On October 13, 1919, permission was granted to the State of New Mexico by the United States Supreme Court to file a suit against the State of Colorado for a settlement of this boundary dispute. The opinion of the court, dated January 26, 1925, was in favor of Colorado, and a resurvey of the boundary line as marked by Darling in 1868 was ordered.[52] Work on the resurvey was commenced in 1927 but is not yet (1930) completed.

The west boundary of Colorado was surveyed in 1878–79. The initial point was a large stone post established in 1875 in connection with the Arizona-New Mexico boundary survey. (See p. 230.)

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[48] For descriptions of nine of these stations see U. S. Coast and Geodetic Survey Special Pub. 110, pp. 154–155, 1925.

[49] Session laws of 1901, ch. 37.

[50] 32 Stat. L. 552–574. See 58th Cong., 3d sess., S. Doc. 89, 1905, for description of this and of the Darling surveys.

[51] The veto message appears in the Congressional Record December 19, 1908, pp. 451–452. The reason given for the veto was that Colorado had not accepted the line and probably would not do so, as it would take from that State a strip of land for nearly its whole length in which there were a considerable number of settlers and five post offices. The discussion that preceded the passage of the joint resolution by the House is given in the Congressional Record December 12, 1908.

[52] 267 U. S. 41. This decision shows that the veto of 1908 was fully justified

This mark was placed on the Colorado line as surveyed by Darling in 1868, but 1 mile 45 chains east of his terminal mark. From this point the line was run northward to the Wyoming line, a measured distance of 276 miles 51.66 chains. It was expected that this line would intersect the south boundary of Wyoming about 30 chains west of the 261st mile mark, but the line as run was nearly 1 mile farther west (262 miles 28.58 chains). A sandstone block 30 by 20 by 6 inches was set 18 inches in the ground at this point, marked "WYO" on the northeast, "COL 32° W L" on the southeast, and "UTAH 41, N L" on the southwest face.

The Colorado-Utah line was retraced in 1885 and re-marked with stone or cedar posts from the south end as far north as milepost 209. Between mileposts 81 and 89 the line was found to diverge toward the west 7° 10′, an error which at least in part accounts for the failure to close as expected on the Wyoming line. The initial mark of this line was thus described in 1885: A stone 7 feet by 12 by 6 inches set 3 feet in the ground, and marked on the northeast face "COLO 37° N L," on the southeast "N MEX 32° W L," on the southwest "ARIZONA," and on the northwest "UTAH 1875." This mark is deserving of more than passing notice, as it is the only one in the United States that is the common corner of four States.

Between the 100th and 110th miles the positions of two boundary marks were determined by the Coast and Geodetic Survey [53] in 1893—one in latitude 38° 27′ 46.7″, longitude 109° 03′ 34.1″, and the other in latitude 38° 33′ 57.0″, longitude 109° 03′ 34.2″. These longitudes show that the line in this locality is nearly half a mile west of its statute position.

NEW MEXICO

The original area of New Mexico was taken in part from the region transferred by Mexico to the United States by the treaty of Guadalupe-Hidalgo and in part from the territory ceded by Texas. (See pp. 37, 171, figs. 14 and 22, pl. 6.) The act of Congress of September 9, 1850, fixing the northern boundary of the State of Texas west of the 103d meridian and providing for the payment of $10,000,000 to that State for land to be ceded to the United States, provided also for the creation of the Territory of New Mexico, when the transaction with Texas was completed. The formation of this Territory was announced by presidential proclamation of December 13, 1850.

The boundaries fixed in the act of 1850 were thus described: [54]

> That all that portion of the territory of the United States bounded as follows: Beginning at a point in the Colorado River, where the boundary line with the Republic of Mexico crosses the same; thence eastwardly with the said

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[53] U. S. Coast and Geodetic Survey Special Pub. 19, p. 100, 1914.

[54] 9 Stat. L. 447.

boundary line to the Rio Grande; thence following the main channel of said river to the parallel of the thirty-second degree of north latitude; thence east with said degree to its intersection with the one hundred and third degree of longitude west of Greenwich; thence north with said degree of longitude to the parallel of thirty-eighth degree of north latitude; thence west with said parallel to the summit of the Sierra Madre; thence south with the crest of said mountains to the thirty-seventh parallel of north latitude; thence west with said parallel to its intersection with the boundary line of the State of California; thence with said boundary line to the place of beginning—be, and the same is hereby, erected into a temporary government by the name of the Territory of New Mexico.

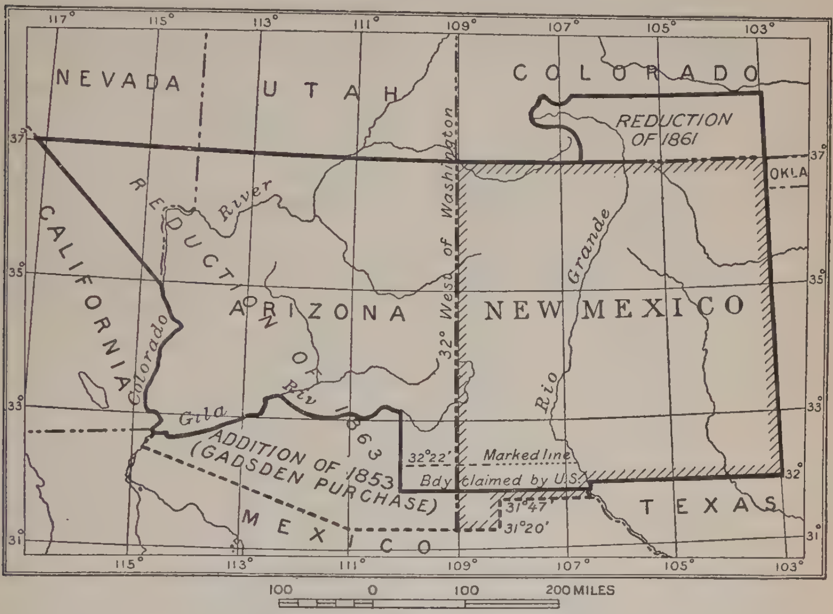
117°
115°
113°
111°
109°
107°
105°
103°
37°
35°
33°
32°
31°
NEVADA
UTAH
COLORADO
REDUCTION OF 1861
OKLA
CALIFORNIA
REDUCTION OF 1863
River
32° West of Washington
ARIZONA
NEW MEXICO
Rio Grande
Colorado
Gila
Riv
ADDITION OF 1853 (GADSDEN PURCHASE)
32°22'
Marked line
Bdy claimed by U.S.
31°47'
31°20'
TEXAS
MEXICO
100
0
100
200 MILES

Figure 22.—Historical diagram of New Mexico

There has been considerable uncertainty as to what mountain range was intended for the west boundary of New Mexico and the east boundary of Utah between latitudes 37° and 38° as fixed by the acts of 1850. The name Sierra Madre used in the New Mexico act is one given to many widely separated mountain groups. Emory [55] refers to Sierra Madre as a general name for the mountains along the Continental Divide. On some old maps the name is given to the mountains between 37° and 38° next east of the Rio Grande. This group is now officially designated as a part of the Rocky Mountain system. On other old maps the mountains west of the Rio Grande between 37° and 38° are called Sierra Madre.

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[55] Emory, W. H., Report on the United States and Mexican boundary survey, vol. 1, p. 40, 1857.

These are now known as the San Juan Mountains and are a part of the Continental Divide.

On the Melish map of 1818 the Mexican State of New Mexico is shown as extending north to latitude 38° and including the Rio Grande Basin. The Carey and Lea map of 1822 gives the boundaries of New Mexico between latitudes 32° and 38° as irregular lines including the Rio Grande Basin. The Tanner map of 1846 of the United States of Mexico shows the western line of New Mexico as extending to about 107° 30′ between latitudes 37° and 38° and including the drainage tributary to the Rio Grande. The Disturnell map of 1847, referred to in the treaty of 1848 with Mexico, shows New Mexico as extending north to latitude 40° and west to longitude 109°, including the Rio Grande Basin. A map of New Mexico compiled by Second Lieut. John C. Parke, published in 1851, shows the Rocky Mountain Range (referred to in the Utah act of 1850) between 37° and 38° as east of the Rio Grande. An undated map by "E. Gilman, draftsman," printed at "P. S. Duval's Steam Lith. Press, Phila.," probably published between 1849 and 1853, shows the boundary of New Mexico between 37° and 38° at about longitude 108° and names the mountains Sierra Madre.

On an official map published by the War Department in 1859 entitled "Territory and Military Department of New Mexico, compiled in the Bureau of Top'l Engrs." the New Mexico boundary between 37° and 38° is plainly indicated as following the Continental Divide, west of the Rio Grande. On most other maps published between 1850 and 1860 the location of the New Mexico boundary is not indicated.

In fixing the summit of the Rocky Mountains as the eastern boundary of the Territory of Utah in the act of 1850, the lawmakers probably assumed that the main range of the Rocky Mountains followed the Continental Divide through what was then an unexplored area.

The Rio Grande is a stream of great importance to New Mexico, and the only apparent reason for assigning to the Territory of New Mexico land north of latitude 37° was to give it control of the Rio Grande Basin. The Republic of Texas claimed an area as far west as the Rio Grande and from its source to the 42d parallel. The area north of the 32d parallel and west of the 103d meridian was sold by Texas to the United States in 1850, and it would seem logical to give the Rio Grande Basin, which is all south of the 38th parallel, to New Mexico. (See fig. 22.)

Mr. L. R. Hafen, historian, department of history, Colorado State Historical and Natural History Society, in a letter of December 1, 1924, wrote as follows:

The San Luis Valley (through which the Rio Grande flows) was actually administered as a part of New Mexico from 1850 to 1861. The governor and superintendent of Indian affairs reports on this area. In his report of September 1, 1854, Governor Merriwether says that the Utahs of New Mexico inhabit "all the northern tributaries of the Rio Grande which lie in New Mexico and north of the 37th parallel of latitude" (33d Cong., 2d sess., H. Ex. Doc. 1, Report of Commissioner of Indian Affairs to Secretary of the Interior). In 1860 the superintendent in New Mexico reports that Agent Head has been placed in charge of the Tabahuaches band of Utahs and his agency located on the Conejos (west of the Rio Grande and north of 37°).

Fort Massachusetts, established in 1852 in the San Luis Valley, was under the jurisdiction of the Department of New Mexico. When Gunnison and Beckwith went through there in 1853 they spoke of the fort as being in New Mexico. G. H. Heap, accompanying Beale's expedition of the same year, speaks of the territory about Fort Massachusetts as the most fertile portion of New Mexico.

During the fifties a number of towns were founded in the San Luis Valley and were governed as parts of Taos County.

The national census of 1860 lists the towns of Costilla, Conejos, and others in San Luis Valley as parts of Taos County, New Mex.[56]

This territory was enlarged on August 4, 1854, by the addition of the Gadsden Purchase[57] and reduced by the formation of Colorado Territory in 1861 (p. 224) and Arizona Territory in 1863 (p. 233). The boundaries as thus changed are the same as those of the present State of New Mexico and are thus described: Beginning at the point of intersection of the 103d meridian of longitude west of Greenwich with the 37th parallel of latitude; running thence south to its point of intersection with the 32d parallel of latitude; thence west on this parallel to its intersection with the Rio Grande; thence southerly down the main channel of the Rio Grande as it was September 9, 1850, to its point of intersection with the boundary line between the United States and Mexico; thence with this boundary to its intersection with the 32d meridian of longitude west from Washington; thence north along this meridian to the 37th parallel of latitude, and east along that parallel to the place of beginning.

The enabling act for the admission of New Mexico to the Union, dated June 16, 1906, included also provisions for the admission of Oklahoma and Arizona, the boundaries of each to be "as at present described."[58] Further provisions for the admission of New Mexico were made by the act of June 20, 1910,[59] and by the joint resolution of August 21, 1911,[60] which required the acceptance of the Texas-New Mexico boundary line as described in the joint resolution of February 16, 1911 (p. 175). The proclamation by the President declaring New Mexico's admission to statehood in effect was dated January 6, 1912.

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[56] See Colorado Mag., May, 1926, p. 46, for article by Mr. Hafen containing the results of his studies of this question.

[57] 10 Stat. L. 575.

[58] 34 Stat. L., pt. 1, 267.

[59] 36 Stat. L., pt. 1, 557.

[60] 37 Stat. L., pt. 1, 39.

For reference to the New Mexico-Oklahoma line see page 217; the New Mexico-Texas line, page 175; the New Mexico-Colorado line, pages 224–225.

From the south end of the Oklahoma-New Mexico boundary line there is a jog in the New Mexico east line of about 2.1 miles westward along the Texas north line to longitude 103° 02′ 28.28″ (North American datum).

The line between New Mexico and Arizona was surveyed in 1875 under the direction of the General Land Office on a meridian determined by reference to a peak named The Needles, located by the Wheeler Survey in 1874, the latitude and longitude of which were taken as 36° 41′ 40.3″ and 108° 50′ 26.1″.[61] This line intersected the south boundary of Colorado as marked by Darling in 1868 (see p. 225) 1 mile 45 chains east of the mark established by him for the southwest corner of that State. The new corner established in 1875 is a sandstone post 7 feet by 12 inches by 6 inches, set 3 feet in the ground (see p. 224) and surrounded by a pile of stone. From this point the line was extended south with marks at mile intervals (most of them small stones inscribed "ARIZ" on the west side and "N MEX" on the east) a measured distance of 390 miles 48.31 chains to an intersection with the United States and Mexico boundary line. This intersection was marked by the 1891–1896 Mexican boundary survey with monument No. 71, the position of which is given as latitude 31° 19′ 56.35″, longitude 109° 02′ 56.82″ (approximate North American datum).

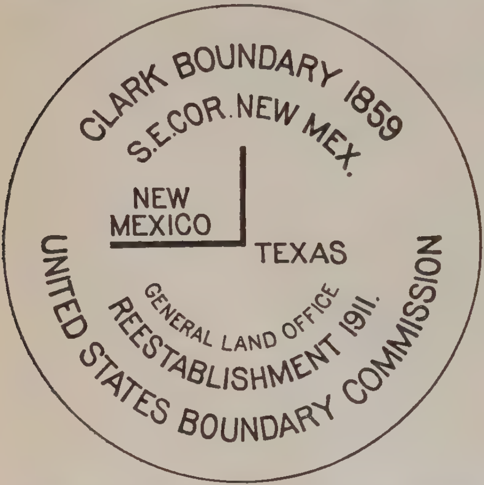

FIGURE 23.—Marks on the tablet at the southeast corner of New Mexico

For a description of the south boundary see pages 39, 175–176. (See fig. 23.)

Suit was instituted in the United States Supreme Court in the October term, 1920, by New Mexico against Texas to have the boundary between the two States south of latitude 32° fixed at the mid-channel of the Rio Grande as it flowed in 1850, when New Mexico was made a Territory, the claim being made by New

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[61] The position given in Tables of geographic positions from data gathered by parties of the U. S. Geog. Surveys W. 100th Mer., p. 32, 1885, is latitude 36° 41′ 28.0″, longitude 108° 50′ 18.1″.

Mexico that prior to an avulsion which occurred in 1864 the river was in many places east of its present position. The case was dismissed in an opinion dated December 5, 1927,[62] in which it was declared that the boundary between the two States is the middle of the channel of the Rio Grande as it was located in 1850. The intersection of this line with the 32d parallel is to be taken as 750 feet west of Clark monument No. 1 reestablished by commissioners in 1911. The opinion of the court contains many interesting references to decisions in other cases where water boundaries were involved. This claim is upheld in the report to the Supreme Court, July 17, 1930, by the commissioner under whose direction the line was surveyed and marked in 1929–30. The net gain in area by New Mexico is 3.9 square miles. There are now 105 concrete monuments on the line.

UTAH

The Mormons settled in Utah in 1847. In 1849 they organized a territorial government which they called Deseret, but a delegate sent to Congress was not recognized by that body.

Utah was established as a Territory by act of September 9, 1850, and included part of the area acquired from Mexico by the treaty of Guadalupe-Hidalgo. (See fig. 24.) Its limits are given in the following extract from the act by which it was created:[63]

> All that part of the territory of the United States included within the following limits, to wit: bounded on the west by the State of California, on the north by the Territory of Oregon, and on the east by the summit of the Rocky Mountains, and on the south by the thirty-seventh parallel of north latitude, be, and the same is hereby, created into a temporary government, by the name of the Territory of Utah.

This area was reduced by the formation, in 1861, of the Territories of Nevada (see p. 235) and Colorado (see p. 223) and in 1864 and 1866 by the extensions eastward of the limits of the State of Nevada.

The present boundaries of Utah are by statute as follows: Commencing with the intersection of the 42d parallel of latitude with the 34th meridian of longitude west from Washington; running thence south on this meridian to the 41st parallel of latitude; thence east on this parallel to the 32d meridian of longitude; thence south on this meridian to its intersection with the 37th parallel of latitude; thence west upon this parallel of latitude to its intersection with the 37th meridian of longitude; thence north on this meridian to its intersection with the 42d parallel of latitude; thence east on the 42d parallel of latitude to the place of beginning.

The enabling act for Utah, approved July 16, 1894, fixed its boundaries "as at present described."[64] The admission to statehood was declared in effect by the President's proclamation of January 4, 1896.

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[62] 275 U. S. 279; 276 U. S. 559.

[63] 9 Stat. L. 453.

[64] 28 Stat. L. 107.

The Utah-Idaho line was surveyed and marked in 1871 under the direction of the General Land Office. The initial point was fixed by reference to an astronomical station near the Bear River. The position for the terminal mark was determined by a long series of observations for latitude with a zenith telescope. The initial mark was a wooden post 8½ feet by 12 inches by 7 inches, marked "34° W L" on the east, "UTAH" on the southwest, "IDAHO" on the northwest, and "42 L 1871" on the north, which was surrounded by a large pile of stones. From this point a line was run due west a measured distance of 153 miles 56 chains to a point where an 8-foot cedar post was set in a mound of rocks and suitably marked for the common corners of Nevada and Utah on the Idaho line. A mark set in 1870 for these corners was destroyed, the new mark being placed 1 mile 12 chains farther south.

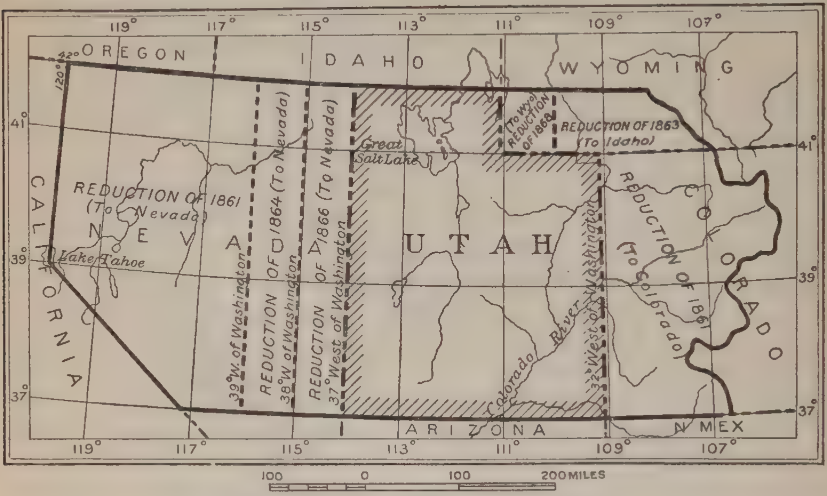
119°
117°
115°
113°
111°
109°
107°
42°
OREGON
IDAHO
WYOMING
120°
41°
39°
37°
CALIFORNIA
REDUCTION OF 1861 (To Nevada)
NEVADA
Lake Tahoe
39° W. of Washington
REDUCTION OF 1864 (To Nevada)
38° W. of Washington
REDUCTION OF 1866 (To Nevada)
37° West of Washington
Great Salt Lake
UTAH
(To Wyo) REDUCTION OF 1868
REDUCTION OF 1863 (To Idaho)
REDUCTION OF 1861 (To Colorado)
32° West of Washington
Colorado River
COLORADO
ARIZONA
N MEX
100
0
100
200 MILES

FIGURE 24.—Historical diagram of Utah

The Utah-Arizona boundary, on the 37th parallel of latitude, was surveyed and marked in 1901. The mark set in 1870 for the southwest corner of Utah was destroyed, as observations for latitude showed that it was 1 mile 31.51 chains too far north. A new corner mark was established 7.88 chains south of the 300th mile mark of the Nevada boundary survey of 1870. This mark consisted of a sandstone post 6 feet by 16 inches by 12 inches, set in a pile of stones and marked "NEVADA" on the northwest, "UTAH" on the northeast "ARIZONA" on the southeast, and "37 N L 1901" on the southwest. The line was run thence due east, checked by five latitude stations,[65] a measured distance of 277 miles 5.18 chains, and intersected the post at the southwest corner of Colorado, set in 1875. The mark for each mile of this line is a stone post or iron pipe. Between the 152d and 153d mile marks the line passes over a sandstone butte, the summit of which rises about 1,000 feet above the plain. (See pl. 10, *B*.) Surveys by the General Land Office in 1927 show that there is a break in this line near longitude 110° 30′ (T. 43 S., R. 13 E., Salt Lake base and meridian), milepost 197 being 33 chains (2,178 feet) farther north than milepost 199.

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[65] For descriptions of these stations see U. S. Coast and Geodetic Survey Special Pub. 110, p. 259, 1925.

For reference to the survey of the west boundary of Utah see Nevada, page 235, and for reference to the east boundary see Colorado, page 225. All these lines were run under the direction of the General Land Office.

ARIZONA

Arizona was organized as a Territory by act of February 24, 1863, from the western part of the Territory of New Mexico (fig. 22) with boundaries described as follows:[66]

> That all that part of the present Territory of New Mexico situate west of a line running due south from the point where the southwest corner of the Territory of Colorado joins the northern boundary of the Territory of New Mexico to the southern boundary line of said Territory of New Mexico be, and the same is hereby, erected into a temporary government by the name of the Territory of Arizona.

In 1866 an area of approximately 11,600 square miles north of the middle of the Colorado River and west of the 37th meridian west from Washington was added to Nevada.[67]

The admission of Arizona to the Union was provided for in acts of June 16, 1906,[68] and June 20, 1910,[69] and in a joint resolution approved August 21, 1911,[70] and was declared in effect by proclamation dated February 14, 1912.

The present boundaries of Arizona are described as follows: Beginning at the point of intersection of the 37th parallel of latitude with the 32d meridian of longitude west from Washington; thence south along this meridian to its intersection with the boundary line between the United States and Mexico; thence with this boundary to the Colorado River; thence up the middle of the main channel of the Colorado River to its point of intersection with the 37th meridian of longitude; north on this meridian to its intersection with the 37th parallel; and eastward along the 37th parallel to the place of beginning.

For reference to surveys of the boundaries see pages 39, 230, 232.

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[66] 12 Stat. L. 665.

[67] 14 Stat. L. 43.

[68] 34 Stat. L., pt. 1, p. 267.

[69] 36 Stat. L., pt. 1, p. 570.

[70] 37 Stat. L., pt. 1, p. 39.

NEVADA

The Territory of Nevada, as organized by act of March 2, 1861, consisted of territory taken from Utah. (See fig. 24.) The following are the boundaries as described in the act:[71]

beginning at the point of intersection of the forty-second degree of north latitude with the thirty-ninth degree of longitude west from Washington; thence running south on the line of said thirty-ninth degree of west longitude, until it intersects the northern boundary line of the Territory of New Mexico; thence due west to the dividing ridge separating the waters of Carson Valley from those that flow into the Pacific; thence on said dividing ridge northwardly to the forty-first degree of north latitude; thence due north to the southern boundary of the State of Oregon; thence due east to the place of beginning.

The limits thus described included a small area to be taken from the State of California. It was therefore

Provided, That so much of the Territory within the present limits of the State of California shall not be included within this Territory until the State of California shall assent to the same.

The State of California having failed to cede the territory west of the 120th meridian,[72] Congress by act of July 14, 1862,[73] added to Nevada a strip of land more than 50 miles wide, west of the 38th meridian from Washington and extending from the north line of New Mexico to the 42d parallel of latitude. The boundaries as described in the enabling act of March 21, 1864,[74] were as follows:

That the said state of Nevada shall consist of all the territory included within the following boundaries, to wit: Commencing at a point formed by the intersection of the thirty-eighth degree of longitude west from Washington with the thirty-seventh degree of north latitude; thence due west along said thirty-seventh degree of north latitude to the eastern boundary line of the state of California; thence in a northwesterly direction along the said eastern boundary line of the state of California to the forty-third degree of longitude west from Washington; thence north along said forty-third degree of west longitude and said eastern boundary line of the state of California to the forty-second degree of north latitude; thence due east along the said forty-second degree of north latitude to a point formed by its intersection with the aforesaid thirty-eighth degree of longitude west from Washington; thence due south down said thirty-eighth degree of west longitude to the place of beginning.

Nevada became a State by presidential proclamation dated October 31, 1864.

An act approved May 5, 1866, further enlarged the area of Nevada by the addition of territory taken from Utah and Arizona, described as follows:[75]

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[71] 12 Stat. L. 209.

[72] See California S. Jour. for 1861, p. 630; idem for 1862, p. 525.

[73] 12 Stat. L. 575.

[74] 13 Stat. L. 30.

[75] 14 Stat. L. 43.

> That, as provided for and consented to in the constitution of the State of Nevada, all that territory and tract of land adjoining the present eastern boundary of the State of Nevada, and lying between the thirty-seventh and the forty-second degrees of north latitude and west of the thirty-seventh degree of longitude west of Washington, is hereby added to and made a part of the State of Nevada.
>
> That there is hereby added to and made a part of the State of Nevada all that extent of territory lying within the following boundaries, to wit: Commencing on the thirty-seventh degree of north latitude at the thirty-seventh degree of longitude west from Washington, and running thence south on said degree of longitude to the middle of the river Colorado of the West; thence down the middle of said river to the eastern boundary of the State of California; thence northwesterly along said boundary of California to the thirty-seventh degree of north latitude; and thence east along said degree of latitude to the point of beginning.

The present State of Nevada according to statute[76] is bounded on the east by the 37th meridian of longitude west of Washington, on the south by the middle of Colorado River to the 35th parallel, on the southwest by the California line, on the west by the 120th meridian of longitude, and on the north by the 42d parallel.

The north boundary of Nevada was surveyed in 1873 from an initial point on the Utah-Nevada line, whose latitude had been carefully determined in 1871, westward to a post set in 1868 for the northeast corner of California. The measured distance was 310 miles 48 chains. The marks placed on the line were mounds of earth, wooden posts, or small stones. This line passed the meridian boundary between Idaho and Oregon at 152 miles 72 chains from the northeast corner of Nevada and 4 chains south of the terminal mark of the 1868 survey.

The east boundary of Nevada, which follows the 37th meridian west of Washington, was surveyed in 1870. The longitude for the initial point was found by direct measurement east from Pilot Peak, whose latitude and longitude had been determined by triangulation from the Salt Lake City astronomic station. The assumed longitude of Pilot Peak was 114° 04′ 55.4″ west from Greenwich; the latest determination by the United States Coast and Geodetic Survey is 114° 04′ 36.27″ (North American datum). The initial point thus selected for the boundary was in the middle of the track of the Central Pacific Railroad (now the Southern Pacific). From this point the line was run northward a measured distance of 46 miles 40 chains to a position which sextant observations indicated was the 42d parallel of latitude. In 1871 a long series of observations made with a zenith telescope showed that the mark at this point was too far north, consequently it was moved south 1 mile 12 chains in 1873.

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[76] Enabling act of 1864 (13 Stat. L. 43) with additions of 1866 (14 Stat. L. 43).

From the initial point the line was then run south to the Colorado River. At a point 1.16 chains south of the railroad track a granite shaft 8 feet high, with its top dressed to 1 foot square and suitably marked, was placed in a pile of rocks, and 298 miles 56 chains south of the railroad a mark was set for the southwest corner of Utah. This mark was later found to be too far north and in 1901 was moved 1 mile 31.51 chains south. (See p. 232.) The distance as then measured, from the initial point on the railroad to the Colorado River, was 356 miles 23.76 chains. This part of the line as well as that north of the railroad was marked with wooden posts, single stones, or mounds of earth and stones.

The following positions on the boundary line between Utah and Nevada have been determined by the United States Coast and Geodetic Survey:[77]

Mark	Latitude	Longitude	Mark	Latitude	Longitude
	° ′ ″	° ′ ″		° ′ ″	° ′ ″
Monument	41 20 31.33	114 02 23.56	Line stake	39 58 58.30	114 02 46.36
Wooden post	41 01 16.84	114 02 28.46	Line stake	39 53 47.06	114 02 25.94
Wooden post	40 56 07.79	114 02 29.95	Monument	39 09 45.92	114 02 53.13
Wooden post	40 55 25.28	114 02 30.09	Line stake	38 00 51.70	114 02 50.21
Line stake	40 00 19.32	114 02 44.73	Line stake	38 00 47.89	114 02 59.31

A survey for the 120th meridian boundary between Nevada and California was first made between 1860 and 1863. A new line farther west was surveyed and marked in 1868, when a point for the intersection of the meridian with the 42d parallel (the south boundary of Oregon) was established. A third line was run in 1872, and a wooden post in a large pile of stones as a mark for the intersection of the 120th meridian and the 42d parallel was placed at a point more than 3 miles east of the 1868 corner. This line is the one which still governs, although it was found in 1889 to be considerably west of the true position of the 120th meridian where it intersects the shore of Lake Tahoe.

The following geographic positions on the California-Nevada meridian boundary on North America datum have been determined:[78]

	Latitude	Longitude
	° ′ ″	° ′ ″
A 6-foot cast-iron post on south side of road between Verdi, Nev., and Truckee, Calif.	39 31 29.51	120 00 04.05
A small stone post near the town of Crystal Peak, Nev	39 31 34.86	120 00 55.41
A squared log surrounded by a large cairn	39 31 33.85	120 00 55.44

A correct marking on the ground of the oblique boundary line between Nevada and California is very difficult. The south terminus is the intersection of the 35th parallel with the middle of the Colorado

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[77] U. S. Coast and Geodetic Survey Special Pub. 19, pp. 105–107, 1914.

[78] Idem, pp. 113–114.

River. The north terminus is the intersection of the 120th meridian of longitude and the 39th parallel of latitude, which falls in Lake Tahoe more than 2 miles from shore; furthermore several kinds of lines that will answer the definition of a "straight line" may be run on the earth's surface.[79] The line actually adopted for the survey of 1893–1899 is a geodetic line, which is the shortest line between the two terminals.

Surveys for this boundary line or parts of it were made in 1852, 1855, 1861, 1865, 1873, 1889, and 1890. The present boundary, which was run by the United States Coast and Geodetic Survey in 1893–1899, differs materially from the previous lines.[79] It was accepted as the true boundary by California act of March 1, 1901, and by Nevada act of February 27, 1903, but has not yet been confirmed by Congress. The azimuth of this line from monument No. 1, at Lake Tahoe, is S. 48° 43′ 20″ E., and from the first monument at the Colorado it is N. 45° 31′ 18″ W. Its total length is 405.146 miles[80] and 142 large stone or concrete marks were set on it at intervals of 1 to 5 miles.[81]

IDAHO

The Territory of Idaho was formed March 3, 1863, from parts of Washington, Dakota, and Nebraska. (See figs. 20, 25, and 26.) Its original limits, which included the present States of Idaho and Montana and all but the southwestern part of Wyoming, were given as follows in the act organizing the Territory:[82]

> That all that part of the territory of the United States included within the following limits, to wit: beginning at a point in the middle channel of the Snake River where the northern boundary of Oregon intersects the same; then follow down said channel of Snake River to a point opposite the mouth of the Kooskooskia, or Clearwater River; thence due north to the forty-ninth parallel of latitude; thence east along said parallel to the twenty-seventh degree of longitude west of Washington; thence south along said degree of longitude to the northern boundary of Colorado Territory; thence west along said boundary to the thirty-third degree of longitude west of Washington; thence north along said degree to the forty-second parallel of latitude; thence west along said parallel to the eastern boundary of the State of Oregon; thence north along said boundary to the place of beginning.

In 1864 the Territory of Montana was formed from a part of this area. (See p. 219.) From another part, together with a part transferred to Dakota by the act of 1864, the Territory of Wyoming was formed in 1868. These changes reduced the limits of Idaho to those described as follows in the act of admission to statehood, approved July 3, 1890:[83]

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[79] See U. S. Coast and Geodetic Survey Rept. for 1900, appendix 3.

[80] Idem, p. 381.

[81] There were eight latitude stations established for this line, descriptions of which may be found in U. S. Coast and Geodetic Survey Special Pub. 110, pp. 144–145, 1925.

[82] 12 Stat. L. 808. For historical sketch of the formation of the Territory of Idaho see The north Idaho annexation issue: Washington Univ. State Hist. Soc. Quart., April, 1930, p. 133.

> Beginning at the intersection of the thirty-ninth meridian with the boundary line between the United States and the British Possessions, then following said meridian south until it reaches the summit of the Bitter Root Mountains; thence southeastward along the crest of the Bitter Root range and the continental divide until it intersects the meridian of thirty-four degrees of longitude; thence southward on this meridian to the forty-second parallel of latitude; thence west on this parallel of latitude to its intersection with a meridian drawn through the mouth of the Owyhee River; north on this meridian to the mouth of the Owyhee River; thence down the mid-channel of the Snake River to the mouth of the Clearwater River; and thence north on the meridian which passes through the mouth of the Clearwater to the boundary line between the United States and the British Possessions, and east on said boundary line to the place of beginning.

The west boundary of Idaho from the mouth of the Clearwater to the 49th parallel was surveyed and marked in 1873 under the direction of the General Land Office. The surveyor who did this work spent several days in attempts to find the position of the mouth of the Clearwater and finally selected the point where empty casks set adrift in the channels of the Snake and the Clearwater bumped together. This line was retraced and 177 stone or iron posts were set on it by the United States Geological Survey in 1908.[84]

The meridian boundary between Idaho and Oregon from the middle of the main channel of the Snake River at the mouth of the Owyhee southward to the calculated position of the 42d parallel, was surveyed and marked in 1868 under the direction of the General Land Office. The latitude of the north end of this line was determined from more than 300 sextant observations as 43° 48′ 41.1″. The position for the south end was also determined from sextant observations. The measured length of the line was 124 miles 17.2 chains. The marks consisted of wooden posts, small stones, or mounds of stone.

The United States Coast and Geodetic Survey in 1915 located a point on this line near its north end, the position of which is latitude 43° 43′ 22.43″, longitude 117° 01′ 33.65″ (North American datum).

The east meridian boundary, from the 42d parallel northward a measured distance of 245 miles 56½ chains, was surveyed in 1874 under the direction of the General Land Office, and a mark was set on the assumed crest of the Rocky Mountains (the Continental Divide) for the corner common to Idaho, Montana, and Wyoming. From this mark along the crest of the mountains to the intersection with the 39th Washington meridian the survey was made in 1904–

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[83] 26 Stat. L. 215.

[84] See U. S. Geol. Survey Bull. 466, 1911, for final report and plat of line.

1906 by the General Land Office. The surveyor who ran the line in 1906 found the tri-State mark about 6 miles too far north. He therefore replaced it with a new mark in the corrected position. (See p. 221.)

The 39th meridian boundary (116° 03′ 02.3″ west of Greenwich) was surveyed in 1874 and resurveyed by the United States Geological Survey in 1898–99, and 92 metal or stone marks were placed along a measured distance of 70.7 miles.[85]

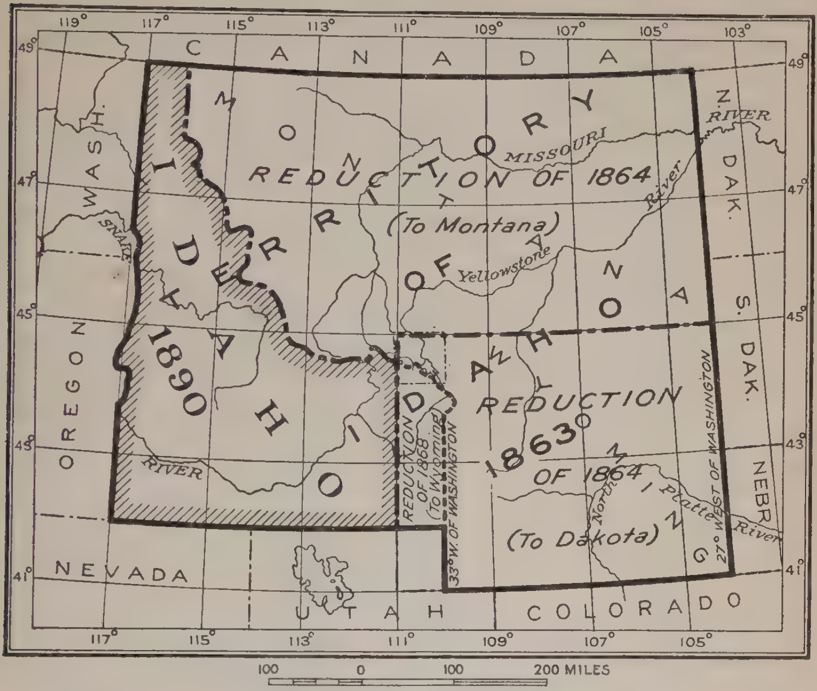
119° 117° 115° 113° 111° 109° 107° 105° 103°
49° 47° 45° 43° 41°
CANADA
WASH.
OREGON
NEVADA
UTAH
COLORADO
N. DAK.
S. DAK.
NEBR.
SNAKE
RIVER
MISSOURI
RIVER
Yellowstone
River
North Platte River
MONTANA
TERRITORY OF IDAHO
IDAHO 1890
WYOMING
REDUCTION OF 1864
(To Montana)
REDUCTION 1863 OF 1864
(To Dakota)
REDUCTION OF 1868
(To Wyoming)
33° W. OF WASHINGTON
27° WEST OF WASHINGTON
100 0 100 200 MILES

FIGURE 25.—Historical diagram of Idaho

For reference to the northern boundary see page 24, and for the southern boundary see pages 231, 235.

WASHINGTON

The Territory of Washington was organized March 2, 1853, from a part of Oregon Territory. (See fig. 26.) Its original limits were defined in the following clause from the act of Congress creating it:[86]

> That from and after the passage of this act all that portion of Oregon Territory lying and being south of the forty-ninth degree of north latitude, and north of the middle of the main channel of the Columbia River from its

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[85] See U. S. Geol. Survey Bull. 170, 1900, for complete report and plat.

[86] 10 Stat. L. 172.

mouth to where the forty-sixth degree of north latitude crosses said river, near Fort Walla Walla, thence with said forty-sixth degree of latitude to the summit of the Rocky Mountains, be organized into and constitute a temporary government by the name of the Territory of Washington.

In 1859, on the formation of the State of Oregon, the residue of the Territory of Oregon, the part extending from the east boundary of the State to the crest of the Rocky Mountains, was added to Washington. This area, with the part of Washington lying east of its present limits, was included in Idaho on the formation of that Territory in 1863.

The present boundaries of the State of Washington are as follows: Beginning on the coast at the mouth of the Columbia River; following up the main channel of the Columbia to its point of intersection with the 46th parallel of latitude; thence east on the 46th parallel to the Snake River; thence down the main channel of the Snake River to the mouth of the Clearwater; thence north on the meridian which passes through the mouth of the Clearwater to the boundary line between the United States and the British possessions; thence west with that boundary line to the Pacific.[87]

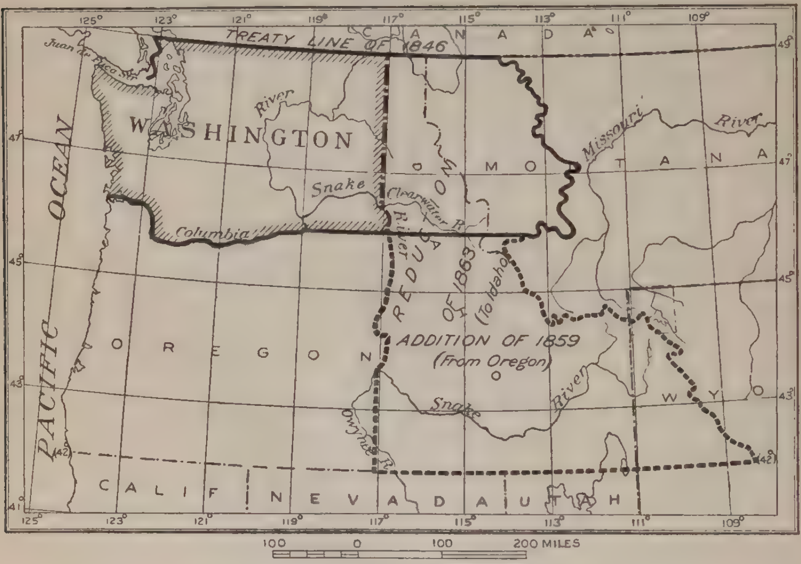
125° 123° 121° 119° 117° 115° 113° 111° 109°
TREATY LINE OF 1846
CANADA
Juan de Fuca Str.
WASHINGTON
River
Snake
Clearwater R.
Columbia
River
REDUCED TO 1863 (To Idaho)
MONTANA
Missouri
River
OCEAN
PACIFIC
OREGON
ADDITION OF 1859
(From Oregon)
Snake
River
Owyhee R.
WYO
CALIF
NEVADA
UTAH
49°
47°
45°
43°
(42)
41°
100 0 100 200 MILES

Figure 26.—Historical diagram of Washington

Washington was declared admitted as a State by proclamation dated November 11, 1889, with its limits as above defined.[88] The enabling act was dated February 22, 1889.

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[87] See articles relating to the northern boundary in Oregon Hist. Soc. Quart., March and December, 1919.

[88] 25 Stat. L. 676.

See pages 22–23 for reference to the survey of the northern boundary, page 238 for survey of the eastern boundary, and page 242 for the survey of the boundary on the 46th parallel.

OREGON

The Oregon region in early days was a source of many disputes[89] between the United States and Great Britain, which nearly led to war. It was claimed by the United States at different times as a part of the Louisiana Purchase, by right of discovery (see pl. 4), and as a part of the Spanish cession.[90] In the convention of 1818 with Great Britain joint occupancy for 10 years was provided for. This status continued until 1846, when Congress by resolution authorized the President to give notice of its discontinuance. The United States at that time claimed the area as far north as latitude 54° 40′, but by the treaty with Great Britain of 1846 (see p. 21) the disputes regarding title were forever settled and the 49th parallel was made the northern boundary.

The Territory of Oregon was organized August 14, 1848, with boundaries described as follows[91] (see fig. 26):

> all that part of the Territory of the United States which lies west of the summit of the Rocky Mountains, north of the forty-second degree of north latitude, known as the Territory of Oregon, shall be organized into and constitute a temporary government by the name of the Territory of Oregon.

In 1853 the Territory was reduced by the formation of Washington Territory, and on February 14, 1859,[92] it was admitted as a State with its present limits. The boundaries were described in the State constitution of 1857 as follows:[93]

> Beginning one marine league at sea due west from the point where the forty-second parallel of north latitude intersects the same; thence northerly, at the same distance from the line of the coast lying west and opposite the State, including all islands within the jurisdiction of the United States, to a point due west and opposite the middle of the north ship channel of the Columbia River; thence easterly to and up the middle channel of said river, and, where it is divided by islands, up the middle of the widest channel thereof, and in like manner up the middle of the main channel of Snake River to the mouth of the Owyhee River; thence due south to the parallel of latitude forty-two degrees north; thence west along said parallel to the place of beginning, including jurisdiction in civil and criminal cases upon the Columbia River and Snake River

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[89] See Mowry, W. A., The territorial growth of the United States, ch. 7, New York, Silver, Burdett & Co., 1902, for an excellent review of these disputes.

[90] For a brief outline of the principles governing acquisition of territory by discovery and occupation see Queensland Geog. Jour., vol. 38, p. 61, Brisbane, Australia, 1923. This article contains a reference to the Oregon dispute. See also Schafer, Joseph, The British attitude toward the Oregon question, 1815–1846; Am. Hist. Rev., January, 1911, pp. 273–299; and Moore, J. B., History of international arbitration: 53d Cong., 2d sess., H. Doc. 212, vol. 1, chs. 7 and 8, 1895.

[91] 9 Stat. L. 323.

[92] 11 Stat. L. 383.

[93] Thorpe, F. N., op. cit., vol. 5, p. 3015.

concurrently with States and Territories of which those rivers form a boundary in common with this State. But the Congress of the United States, in providing for the admission of this State into the Union, may make the said northern boundary conform to the act creating the Territory of Washington.

The United States act of February 14, 1859, concludes the description as follows:[94]

to a point near Fort Walla-Walla, where the forty-sixth parallel of north latitude crosses said river; thence east on said parallel to the middle of the main channel of the Shoshonnes or Snake River; thence up the middle of main channel of said river, to the mouth of the Owyhee River; thence due south, to the parallel of latitude forty-two degrees north; thence west, along said parallel, to the place of beginning.

The Oregon-Washington boundary on the 46th parallel, between the Snake and Columbia Rivers, was surveyed and marked in 1863–64 under the direction of the General Land Office. The latitude used was derived from more than 500 observations with the sextant. Two observation stations were occupied, one near the foot of Cathedral Rock on the Columbia, the other near Cottonwood Creek on the west side of the Blue Mountains. A random line was run between them, which showed an apparent difference of latitude of 4″. The final line was run on the mean latitude. Marks were set at mile intervals for 42 miles east from the Columbia, then at irregular intervals over the Blue Mountains. The measured length of the line was 96 miles 57 chains. The easternmost mark, which was placed 3 chains from the west bank of the Snake River, was a 7½-foot post 12 inches in diameter, marked "W" on the north, "O" on the south, and "46 L 1868" on the east side, and set in a 6-foot pile of stones.

By a joint resolution approved June 10, 1910,[95] Congress gave its consent to the States of Oregon and Washington to fix their common boundary in the Columbia River and to cede the one to the other islands the title to which had been in dispute, but up to the present time no action appears to have been taken by either State to make use of the authority thus granted.

CALIFORNIA

The area included in the present State of California is part of that acquired from Mexico by the treaty of Guadalupe-Hidalgo in 1848. (See fig. 2.) From July 4, 1848, until December 20, 1849, it was under military control, the commanding officer of the military force stationed there acting as provisional governor. From the latter date until Congress passed the act for the admission of California to the Union, approved September 9, 1850,[96] a form of local government was in effect.

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[94] 11 Stat. L. 383.

[95] 36 Stat. L. 881. See also 211 U. S. 127 and 214 U. S. 217.

[96] 9 Stat. L. 452.

The boundaries of the State, as described in the constitution of 1849, are as follows:[97]

> Commencing at the point of intersection of forty-second degree of north latitude with the one hundred and twentieth degree of longitude west from Greenwich, and running south on the line of said one hundred and twentieth degree of west longitude until it intersects the thirty-ninth degree of north latitude; thence running in a straight line in a southeasterly direction to the river Colorado, at a point where it intersects the thirty-fifth degree of north latitude; thence down the middle of the channel of said river to the boundary line between the United States and Mexico as established by the treaty of May 30, 1848; thence running west and along said boundary line to the Pacific Ocean, and extending therein three English miles; thence running in a northwesterly direction and following the direction of the Pacific coast to the forty-second degree of north latitude; thence on the line of said forty-second degree of north latitude to the place of beginning. Also all the islands, harbors, and bays along and adjacent to the Pacific coast.

For reference to surveys of the eastern boundary see pages 236–237.

The principal islands claimed as part of the State of California are:

Santa Catalina and San Clemente, 20 to 50 miles off the coast, included in Los Angeles County.

San Nicolas, 60 miles from the coast, included in Ventura County.

Santa Cruz, Santa Rosa, and San Miguel, 20 to 25 miles from the coast, included in Santa Barbara County.

These and many smaller islands passed under the control of the United States in consequence of the treaty of Guadalupe-Hidalgo. The question of sovereignty over these islands has been raised several times, the claim being made that as they were not mentioned in the treaty of 1848, Mexico had not given up its title to them, but it is evident from the following references that it was generally understood after the treaty was signed that the islands were a part of the territory ceded to the United States.

A general assertion of jurisdiction over the "islands adjacent to the Pacific coast" was made in the State constitution of 1849, which was formally approved by Congress in 1850.

In an act of Congress approved August 31, 1852,[98] an appropriation was made for subdividing these islands, several of which were mentioned by name, "so that said islands may be readily disposed of under the laws of the United States."

The United States Supreme Court at its December term, 1859, decided a case relating to a land grant on the island of Santa Cruz,[99] n which the claim was based on a Mexican grant of 1839. The question of jurisdiction of the United States over the island was not brought up, although it must have been considered.

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[97] Thorpe, F. N., op. cit., vol. 1, p. 405. For a brief review of the events that resulted n the adoption of the boundaries of California as at present fixed and of attempts to hange them see Guinn, J. M., How California escaped State division: Hist. Soc. Southern California Pub., vol. 6, 1905.

[98] 10 Stat. L. 91.

[99] 23 Howard 465.

Patents have been issued from time to time by the General Land Office for land on the several islands, and reservations have been made on behalf of the United States for lighthouses.

So far as can be ascertained no formal adverse claim to these islands has ever been presented by Mexico, and in view of the foregoing facts it is certain that none can now be made with a hope for favorable consideration.[1]

To determine the proper position for the northeast corner of California (latitude 42°, longitude 120°) an astronomic station was established at Camp Bidwell, where more than 3,000 measurements of lunar distances were said to have been made for longitude in 1868–69. The position for the corner was computed to be 9 miles 56 chains north and 4 miles 78 chains east from the observatory. From the corner thus found the line was run west a distance of 212 miles 28 chains to a terminal mark 12 chains from the shore of the Pacific Ocean. The geographic position of this post is latitude 41° 59′ 55.7″, longitude 124° 12′ 29.5″.[2]

The marks consisted of wooden posts or small stones with "O" cut on the north side, "C" on the south, and the mile number and date on the other sides.

GENERAL STATISTICS RELATING TO THE UNITED STATES

REFERENCES

Nearly all boundaries of States west of the Mississippi, as well as those of many central and southern States, have been surveyed under the direction of the General Land Office. Notes of all such surveys and plats for most of them are on file in the General Land Office, Department of the Interior, in Washington, D. C. Many of the field notes are in excellent form, in books especially prepared for them, and are illustrated by photographs or sketches. Other notes are in books of field notes with the regular township surveys. Many resurveys or retracements of short parts of boundary lines have been made, and numerous corners have been reestablished in connection with the regular surveys of the public lands, which are not mentioned in the foregoing pages but are noted in the records of the General Land Office.

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[1] See Land Dec., vol. 20, p. 106, Washington, 1895.

[2] U. S. Coast and Geodetic Survey Special Pub. 31, p. 73, 1915.

The notes and plats are open to public inspection and are indexed so that reference to them is easy; or copies will be supplied to anyone on payment of nominal fees.

Historical diagrams showing changes in State or national boundaries are to be found in many publications, a few of which are listed below:

Faris, J. T., The romance of the boundaries, New York, Harper & Brothers, 1926. This book contains a bibliography of boundary references with 138 entries.

Lamberton, R. H., An historical atlas * * * from the dawn of history to the present time, 7th ed., New York, Townsend Mac Coun, 1884.

MacCoun, Townsend, An historical geography of the United States, rev. ed., New York, Silver, Burdett & Co., 1901.

Mowry, W. A., The territorial growth of the United States, New York, Silver, Burdett & Co., 1902.

U. S. Bureau of Statistics, Monthly Summary of Commerce and Finance of the United States for August, 1902.

Stocking, S. W., Areas and political divisions of the United States, with map: Statistical atlas of the United States Bureau of the Census, Washington, 1874.

ORGANIZATION OF THE UNITED STATES GOVERNMENT

The name "united States of America" was used in the Declaration of Independence, July 4, 1776,[3] and the use of the name "United States" for all State papers was ordered by the Continental Congress on September 9, 1776. The first of the "Articles of Confederation and perpetual Union," etc., of 1777, is "The stile of this Confederacy shall be The United States of America."

The Articles of Confederation, agreed to by delegates from the thirteen original colonies on November 15, 1777, were ratified by them on the dates given below. The defects in the form of government thereby instituted were so many that steps were soon taken to change it. A convention called in 1787 to draft a constitution for the United States completed its labors on September 17 of the same year. The Constitution of the United States of America was ratified and the States became members of the Union on various dates between 1787 and 1790.

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[3] See Meginness, J. F., Otzinachson; or, a history of the West Branch Valley of the Susquehanna, pp. 192–193, Philadelphia, 1857, and Report of the commission to locate he sites of frontier forts of Pennsylvania, vol. 1, pp. 407–409, for references to the Declaration of Independence, which by a strange coincidence was adopted on the same day at Pine Creek, Lycoming County, 150 miles from Philadelphia.

The thirteen original States	Articles of Confederation ratified	The Constitution ratified [a]
New Hampshire	July 9, 1778	June 21, 1788.
Massachusetts [b]	do	Feb. 6, 1788.
Connecticut	do	Jan. 9, 1788.
Rhode Island [c]	do	May 29, 1790.
New York	do	July 26, 1788.
New Jersey	Nov. 26, 1778	Dec. 18, 1787.
Pennsylvania [b]	July 9, 1778	Dec. 12, 1787.
Delaware	May 5, 1779	Dec. 7, 1787.
Maryland	Mar. 1, 1781	Apr. 28, 1788.
Virginia [b]	July 9, 1778	June 26, 1788.
North Carolina	July 21, 1778	Nov. 21, 1789.
South Carolina	July 9, 1778	May 23, 1788.
Georgia	July 24, 1778	Jan. 2, 1788.

[a] Copies of the certificates of ratification with accompanying recommendations by various States for changes in the Constitution are given in Formation of the Union of the American States: 69th Cong., 1st sess., H. Doc. 398, pp. 1009-1059, 1927.

[b] The official title is "The Commonwealth of ——."

[c] The full name is "The State of Rhode Island and Providence Plantations."

THE UNITED STATES FLAG

Congress, by act approved April 4, 1818, effective July 4, 1818,[4] ordered that "the flag of the United States be thirteen horizontal stripes, alternate red and white; that the union be twenty stars [there were then 20 States], white in a blue field," and that "on the admission of every new State into the Union, one star be added to the union of the flag" on the 4th of July following.

EARLY SESSIONS OF CONGRESS

The place and time of the early sessions of Congress are indicated below.

Continental Congress and Congress of the Confederation

Philadelphia	Sept. 5, 1774 to Oct. 26, 1774.
Do	May 10, 1775, to Dec. 12, 1776.
Baltimore	Dec. 20, 1776, to Mar. 4, 1777.
Philadelphia	Mar. 5, 1777, to Sept. 18, 1777.
Lancaster, Pa	Sept. 27, 1777 (one day only).
York, Pa	Sept. 30, 1777, to June 27, 1778.
Philadelphia	July 2, 1778, to June 21, 1783.
Princeton, N. J	June 30, 1783, to Nov. 4, 1783.
Annapolis, Md	Nov. 26, 1783, to June 3, 1784.
Trenton, N. J	Nov. 1, 1784, to Dec. 24, 1784.
New York City	Jan. 11, 1785, to Nov. 4, 1785.
Do	Nov. 7, 1785, to Nov. 3, 1786.
Do	Nov. 6, 1786, to Oct. 30, 1787.
Do	Nov. 5, 1787, to Oct. 21, 1788.
Do	Nov. 3, 1788, to Mar. 2, 1789.

United States Congress

New York City	Mar. 4, 1789, to Sept. 29, 1789.
Do	Jan. 4, 1790, to Aug. 12, 1790.

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[4] 3 Stat. L. 415. See also 1 Stat. L. 341, and Preble, G. H., Origin and history of the American flag, 2d ed., Philadelphia, 1917.

Philadelphia was the meeting place for subsequent sessions from December 6, 1790, until November, 1800, when the seat of Government was moved to Washington.[5]

AREAS OF THE STATES AND OUTLYING POSSESSIONS

The following facts relating to the area of the United States and its outlying possessions have been assembled in tabular form for onvenient reference. The areas are approximate only. Exact outlines of drainage basins of large rivers that form boundaries are in many places not well established even on the best of maps.

Original area of the United States and areas of continental changes (except Alaska and Canal Zone)

	Square miles
The territory of the United States, as recognized by Great Britain in 1783, being the area limited by the present accepted northern boundary from eastern Maine to a point near the northwesternmost angle of the Lake of the Woods, thence by a direct line to the source of the Mississippi River, down that river to the 31st parallel of latitude, thence eastward along that parallel and the north line of Florida to the Atlantic Ocean (excluding the water surfaces of the Great Lakes, except Lake Michigan, and the Atlantic Ocean)	[a] 869, 735
The parts of the Great Lakes on the international boundary which are under the jurisdiction of the United States	38, 550
A 3-mile strip along the Atlantic coast	5, 000
Louisiana Purchase, 1803: That part of the drainage basin of the Mississippi River west of that river, including the basin of the Missouri River and the area south of the 31st parallel between the Mississippi and Perdido Rivers:	
South of the 49th parallel	[b] 909, 130
North of the 49th parallel	[c] 12, 365
Red River Basin and Lake of the Woods drainage: South of the 49th parallel, west of the head of the Mississippi River	48, 080
By treaty with Spain in 1819 the United States acquired East and West Florida, an area of 58,666 square miles, also areas west of the Mississippi River (principally in Louisiana) amounting to 22,834 square miles, but relinquished to Spain 97,150 square miles (of the Louisiana Purchase), or a net loss of	15, 650

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[a] These figures were obtained by adding the accepted areas of the 24 States and the District of Columbia (723,947 square miles) which lie wholly within the 1783 treaty imits to the parts of Alabama (49,359 square miles) and Mississippi (44,079 square miles) north of latitude 31° and Minnesota (29,950 square miles) east of the Mississippi nd Lake of the Woods lines. The Lake Michigan area (22,400 square miles) was also ncluded, as it is within the original cession.

[b] If it is assumed that the United States had no valid claim to the area south of latiude 31° and between the Perdido and Mississippi Rivers, then these figures should be educed by an area of 13,433 square miles and that amount added to the area of the lorida Purchase. Of the 13,433 square miles 2,639 square miles is now a part of labama, 2,786 a part of Mississippi, and 8,008 a part of Louisiana.

[c] The Canada Year Book, p. 11, Ottawa, 1929.

[5] 1 Stat. L. 130. See A biographical Congressional directory: 61st Cong., 2d sess., S. Doc. 654, p. 25, 1913, and 69th Cong., 2d sess., H. Doc. 783, p. 31, 1928, for places and dates of meetings of the Continental Congress. See annual Congressional Directory for ates and meetings of the United States Congress; also 69th Cong., 1st sess., H. Doc. 398, . 1062, 1927. 56th Cong., 2d sess., H. Doc. 552, 1901, gives illustrations of the eight uildings in which sessions of Congress were held.

	Squar miles
Texas annexed in 1845 (including 95,650 square miles of the area relinquished to Spain in 1819)	388, 68
Oregon Territory, title established in 1846	[d] 286, 54
Mexican cession, 1848 (included 775 square miles relinquished to Spain in 1819)	[d] 529, 18
Gadsden Purchase, 1853	[d] 29, 67

The recent survey of the Texas-Oklahoma 100th meridian boundar (see p. 174), approved by the United States Supreme Court Marc 17, 1930,[5a] increases the area of Texas 44.6 square miles and reduce the area of Oklahoma by a like amount.

The following areas of States are based on calculations by representatives of the General Land Office, the Geological Survey, an the Bureau of the Census.[6] They do not include the part of the wate area of the Great Lakes, the Atlantic Ocean, the Gulf of Mexico, th Pacific Ocean, and the Strait of Juan de Fuca that is under th jurisdiction of the United States.

Areas of States and possessions of the United States, in square miles

State	Land	Water	Total
Alabama	51, 279	719	51, 998
Arizona	113, 810	146	113, 956
Arkansas	52, 525	810	53. 335
California	155, 652	2, 645	158, 297
Colorado	103. 658	290	103, 948
Connecticut	4, 820	145	4, 965
Delaware	1, 965	405	2, 370
District of Columbia	62	8	70
Florida	54, 861	3, 805	58, 666
Georgia	58, 725	540	59, 265
Idaho	83. 354	534	83, 888
Illinois	56, 043	622	56, 665
Indiana	36, 045	309	36, 354
Iowa	55, 586	561	56, 147
Kansas	81, 774	384	82, 158
Kentucky	40, 181	417	40, 598
Louisiana	45, 409	3, 097	48, 506
Maine	29, 895	3, 145	33, 040
Maryland	9, 941	2, 386	12, 327
Massachusetts	8, 039	227	8, 266
Michigan	57, 480	500	57, 980
Minnesota	80, 858	3, 824	84, 682
Mississippi	46, 362	503	46, 865
Missouri	68, 727	693	69. 420
Montana	146, 131	866	146, 997
Nebraska	76, 808	712	77, 520
Nevada	109, 821	869	110, 690
New Hampshire	9, 031	310	9, 341
New Jersey	7, 514	710	8, 224
New Mexico	122, 503	131	122, 634
New York	47, 654	1, 550	49, 204
North Carolina	48, 740	3, 686	52, 426
North Dakota	70, 183	654	70, 837
Ohio	40, 740	300	41, 040
Oklahoma	69, 414	643	70, 057
Oregon	95, 607	1, 092	96, 699
Pennsylvania	44, 832	294	45, 126
Rhode Island	1, 067	181	1, 24
South Carolina	30, 495	494	30, 98
South Dakota	76, 868	747	77, 61
Tennessee	41, 687	335	42, 02
Texas	262, 398	3, 498	265. 89
Utah	82, 184	2, 806	84, 99
Vermont	9, 124	440	9, 56
Virginia	40, 262	2, 365	42, 62
Washington	66. 836	2, 291	69, 12
West Virginia	24, 022	148	24, 17
Wisconsin	55, 256	810	56. 06
Wyoming	97, 548	366	97, 91
Continental United States	2, 973, 774	53, 015	3, 026, 7
OUTLYING POSSESSIONS			
Alaska			586, 40
Guam			20
Hawaii			[a] 6, 40
Panama Canal Zone			55
Philippine Islands			[b] 114, 40
Porto Rico			[c] 3, 43
Samoa			7
Virgin Islands of the United States			[b] 13
			711, 60
Grand total for the United States:			
States			3, 026, 78
Outlying possessions			711, 60
			3, 738, 39

[a] Territorial surveyor.
[b] U. S. Coast and Geodetic Survey.
[c] Including several small islands.

The average or mean area of the 48 States is 63,057 square miles

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[d] Areas from Bond, Frank (chief clerk, General Land Office), Louisiana and th Louisiana Purchase, p. 13, Washington, 1912.

[5a] 281 U. S. 109.

[6] Fourteenth Census, vol. 1.

COST OF TERRITORY PURCHASED BY THE UNITED STATES

The following data were furnished by the United States Treasury Department in November and December, 1926, and show total payments made up to June 30, 1926, but do not include administrative or treaty costs or payments made on private land claims, legation sites, etc. (see p. 60).

Louisiana Purchase, 1803:

Paid to r[illegible] American citizens under treaty	$3. 747, 268. 98
Principal of bonds issued and repaid	11, 250, 000. 00
Interest paid on bonds	8, 221, 320. 50
	23, 218, 589. 48
Discount saved less commission paid on bonds purchased	5, 021. 75
Net total	23, 213, 567. 73

The treaty of April 30, 1803 (see p. 29), provided for the payment to France of 60,000,000 francs ($11,250,000) by the United States, independent of the sum which was to be fixed by a convention for the payment of the debts due from France to the citizens of the United States for depredations on their commerce (the French spoliation claims). Bonds to the amount of $11,250,000, bearing interest at 6 per cent per annum, were issued and given to France, all of which were redeemed by the United States between 1812 and 1823. An additional sum of $3,750,000 was set aside by the United States to cover the French spoliation claims. Actually $3,747,268.98 has been paid on this account.

Florida cession, 1819:

Principal of bonds issued and repaid	$5, 000, 000. 00
Interest paid on bonds	1, 674, 057. 47
	6, 674, 057. 47

No direct payment was made to Spain on this account, but in accordance with a provision of the treaty the United States assumed claims of its citizens against Spain to the amount of $5,000,000. (See p. 34.)

Texas, 1850:

Paid in cash to creditors of Texas	$7, 750, 000. 00
Principal of bonds issued and repaid	4, 981, 000. 00
Interest paid	2, 704, 723. 52
Premium paid on purchase of bonds less discount received	60, 724. 25
	15, 496, 447. 77

When Texas was annexed to the United States in 1845 it claimed a large territory adjoining its present area and extending as far north as the 42d parallel; it also had various claims against the United States. In order to indemnify Texas for all claims arising out of the annexation of the State Congress in 1850[7] authorized the issue of $10,000,000 stock, to bear interest at 5 per cent. Under this act but $5.000.000 in stock was issued to the State, as by the act of February 28, 1855,[8] it was provided that the creditors of Texas should be paid in cash, and the amount to be paid them was increased to $7,750,000. On November 1, 1926, there was $19,000 of the face value of this stock still outstanding.

Territory acquired from Mexico under treaty of Guadalupe-Hidalgo, 1848: Principal of payments together with interest paid, less gain in exchange, $16,295,148.89.

Article XII of the treaty of peace after the Mexican War provided for the payment to Mexico of $15,000,000. Of this sum $3,000,000 was to be paid at the city of Mexico in gold and silver coin immediately after ratification of the treaty. The remaining $12,000,000 was to be paid in coin in annual installments of $3,000,000, together with interest at 6 per cent. Settlement of the first installment was made as follows:

First installment:	
Paid from cash on hand belonging to Army funds	$769, 650. 00
Paid by drafts drawn by General Butler	900, 000. 00
Paid by drafts drawn by Nathan Clifford, Commissioner, including premium	1, 192, 981. 82
Value of arms sold by General Butler to the Mexican Government	87, 655. 90
Unpaid portion of military contribution assumed by the Mexican Government	49, 712. 28
	3, 000, 000. 00

The remaining installments were paid by the United States through banking houses, as follows:

Second installment: 4 warrants issued in favor of Baring Bros. & Co., during period Feb. 28 to June 1, 1849	$3, 552, 600. 00
Third installment: 6 warrants issued in favor of Howland & Aspinwall, N. M. Rothschild & Sons, and Lionel Davidson, New York, during period Jan. 23 to June 29, 1850	3, 386, 616. 31
Fourth installment: 5 warrants issued in favor of Baring Bros. & Co., Howland & Aspinwall, and Corcoran & Riggs, during period May 7 to June 28, 1851	3, 242, 400. 00
Fifth installment: 16 warrants issued in favor of Baring Bros. & Co., Howland & Aspinwall, and Corcoran & Riggs, during period Feb. 23 to Apr. 19, 1852	3, 180, 000. 00

The aggregate, including interest, was $16,361,616.31. There was, however, a profit of $66,467.42 which accrued to the United States from gain in exchange. This was refunded into the Treasury during the fiscal year 1853.

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[7] 9 Stat. L. 447.

[8] 10 Stat. L. 617.

Gadsden Purchase from Mexico, 1853 $10, 000, 000. 00

Article III of the treaty provided that the United States should pay to the Government of Mexico, in the city of New York, the sum of $10,000,000, of which $7,000,000 was to be paid immediately after the ratification of the treaty and the remaining $3,000,000 when the boundary line had been surveyed and marked. The first payment was made to Gen. N. A. Almonte, representative of the Mexican Government, in the fiscal year 1854. The final payment was made during the fiscal year 1856.

Alaska acquired from Russia, 1867 $7, 200, 000. 00

Payment for Alaska was made by draft on the Assistant Treasurer at New York August 1, 1868. The draft was drawn in favor of Edward de Staecke, who represented the Emperor of Russia.

Philippine Islands acquired from Spain in 1898 $20, 000, 000. 00

Settlement of this account was made in the form of four warrants of $5,000,000 each, dated April 29, 1899, drawn on the Assistant Treasurer of the United States at New York, in favor of Jules Cambon, ambassador extraordinary and plenipotentiary of France, representing the Government of Spain.

Philippine purchase of 1900 $100, 000. 00

By treaty of November 7, 1900, the United States agreed to pay $100,000 for additional islands ceded by Spain. (See p. 48.) This amount was appropriated by Congress March 3, 1901, and paid by check on the United States Treasury, dated March 23, 1901, in favor of Duc de Alcos, minister plenipotentiary of Spain.

Canal Zone, 1903:

Initial payment	$10, 000, 000. 00
Annual payments to June 30, 1926	3, 500, 000. 00
Payment to New Panama Canal Co. of France	40, 000, 000. 00
	53, 500, 000. 00

By convention signed November 18, 1903, the United States agreed to pay the Republic of Panama $10,000,000 in gold and also annual payments of $250,000. (See p. 51.) The first payment of $10,000,000 was made by two Treasury warrants—one for $1,000,000 under date of April 29, 1904, the other for $9,000,000 under date of May 19, 1904. Both payments were made through J. P. Morgan & Co., fiscal agents.

The payment of $40,000,000 to the New Panama Canal Co. was authorized by congressional acts of June 28, 1902, and April 28, 1904, and effected by Treasury warrant of May 9, 1904, in favor of J. P. Morgan & Co., acting as a special disbursing agents of the United States for the purpose of settling claims in accordance with the agreement between the United States and the Canal Co. To the total above stated should properly be added the payment of $25,000,000 to the Republic of Colombia. (See p. 53.)

The Virgin Islands purchased from Denmark, 1916 $25, 000, 000

The convention between the United States and Denmark signed August 4, 1916, called for the payment of $25,000,000 to Denmark. An appropriation in settlement of this indebtedness was made by congressional act of March 3, 1917. Under date of March 31, 1917, a warrant on the Treasurer for the full amount was issued in favor of the envoy extraordinary and minister plenipotentiary of Denmark.

LENGTH OF THE COAST LINES OF THE STATES AND THE PRINCIPAL OUTLYING POSSESSIONS

The following lengths of the tidal shore lines of States bordering on the Atlantic Ocean, the Gulf of Mexico, and the Pacific Ocean are taken from a bulletin of the United States Coast and Geodetic Survey, dated November, 1915. The figures give the length in statute miles in steps of 1 mile along the shore lines as represented on the best available maps and include the shore lines of bays and other bodies of water the width of whose entrance is greater than 1 mile, to points where these waters narrow to 1 mile, also the shore lines of bodies of tidal water more than 1 mile wide which lie close beside the main waters even though the width of the entrance is less than 1 mile.

Lengths of tidal shore lines of the United States, in statute miles

State	Mainland	Islands	Total
Atlantic coast:			
Maine	558	761	1, 319
New Hampshire	15	5	20
Massachusetts	421	250	671
Rhode Island	118	100	218
Connecticut	126	18	144
New York	31	798	829
New Jersey	392	368	760
Pennsylvania	13	----	13
Delaware	140	14	154
Maryland	770	275	1, 045
Virginia	780	500	1, 280
North Carolina	1, 040	831	1, 871
South Carolina	281	960	1, 241
Georgia	166	727	893
Florida	714	507	1, 221
Gulf coast:			
Alabama	174	117	291
Florida	1, 273	1, 257	2, 530
Mississippi	99	103	202
Louisiana	1, 122	591	1, 713
Texas	973	709	1, 682
Pacific coast:			
California	1, 264	291	1, 555
Oregon	429	60	489
Washington	1, 037	684	1, 721
Total:			
Atlantic coast	5, 565	6, 114	11, 679
Gulf coast	3, 641	2, 777	6, 418
Pacific coast	2, 730	1, 035	3, 765
Grand total	11, 936	9, 926	21, 862

Lengths of tidal shore lines of the principal outlying possessions in steps of 3 miles

	Statute miles
Alaska (8,590 miles is on islands)	15, 132
Philippine Islands	10, 850
Porto Rico	362
Guam	84
Hawaiian Islands	810
Panama Canal Zone (in 1-mile steps)	33
Samoan Islands	91
Virgin Islands of the United States	163

The following are the approximate lengths of the shore lines (including islands) of the United States on the Great Lakes and connecting rivers east of Lake Superior as estimated by the United States Lake Survey in 1928:

	Statute miles
Lake Superior	1, 182
St. Marys River	87
Lake Huron	581
St. Clair River	66
Lake St. Clair	46
Detroit River	54
Lake Erie	404
Niagara River	71
Lake Ontario	303
St. Lawrence River to the 45th parallel	247
Total shore line on international waters	3, 041

The Canadian shore line is 3,772 miles. The shore line of Lake Michigan, which is entirely in the United States, is 1,304 statute miles, of which 381 miles borders on Wisconsin, 823 on Michigan, 60 on Illinois, and 40 on Indiana.

GEOGRAPHIC CENTERS OF THE CONTINENTAL UNITED STATES AND OF THE SEVERAL STATES

The geographic center of an area may be defined as that point on which the surface of the area would balance if it were a plane of uniform thickness, or in other words the center of gravity of the surface. The exact position of the center of each State can not be determined from the data available, but the following approximate positions are sufficiently exact for ordinary purposes. In finding the centers of the States islands adjacent to their coast lines and large bodies of water on their boundaries have been excluded.

The center of the continental United States (exclusive of Alaska) is in the eastern part of Smith County, Kans., latitude 39° 50′, longitude 98° 35′.[9]

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[9] U. S. Coast and Geodetic Survey Special Pub. 47, p. 57, 1918.

Geographic centers of the States

State	County	Locality
Alabama	Chilton	12 miles southwest of Clanton.
Alaska (including islands)		95 miles south of Fort Gibbon.
Arizona	Yavapai	55 miles southeast of Prescott.
Arkansas	Pulaski	12 miles north of west of Little Rock.
California	Madera	35 miles northeast of Madera.
Colorado	Park	30 miles northwest of Pikes Peak.
Connecticut	Hartford	At East Berlin.
Delaware	Kent	11 miles south of Dover.
District of Columbia		Near corner of Fourth and L streets, NW.
Florida	Citrus	12 miles west of north of Brooksville.
Georgia	Twiggs	18 miles southeast of Macon.
Idaho	Custer	24 miles south of west of Challis.
Illinois	Logan	28 miles northeast of Springfield.
Indiana	Boone	14 miles west of north of Indianapolis.
Iowa	Story	5 miles northeast of Ames.
Kansas	Barton	15 miles northeast of Great Bend.
Kentucky	Marion	3 miles west of north of Lebanon.
Louisiana	Avoyelles	3 miles southeast of Marksville.
Maine	Piscataquis	18 miles north of Dover.
Maryland	Anne Arundel	3 miles east of Collington.
Massachusetts	Worcester	In northern part of city of Worcester.
Michigan	Wexford	5 miles west of north of Cadillac.
Minnesota	Crow Wing	10 miles southwest of Brainerd.
Mississippi	Leake	9 miles north of west of Carthage.
Missouri	Miller	20 miles southwest of Jefferson City.
Montana	Fergus	12 miles west of Lewistown.
Nebraska	Custer	10 miles northwest of Broken Bow.
Nevada	Lander	23 miles southeast of Austin.
New Hampshire	Belknap	3 miles east of Ashland.
New Jersey	Mercer	5 miles southeast of the State capitol.
New Mexico	Torrance	12 miles west of south of Willard.
New York	Madison	6 miles east of south of Oneida.
North Carolina	Chatham	10 miles northwest of Sanford.
North Dakota	Sheridan	5 miles southwest of McClusky.
Ohio	Delaware	25 miles east of north of Columbus.
Oklahoma	Oklahoma	8 miles north of Oklahoma City.
Oregon	Crook	25 miles east of south of Prineville.
Pennsylvania	Center	2½ miles southwest of Bellefonte.
Rhode Island	Kent	1 mile west of south of Crompton.
South Carolina	Richland	13 miles southeast of Columbia.
South Dakota	Hughes	8 miles northeast of Pierre.
Tennessee	Rutherford	5 miles northeast of Murfreesboro.
Texas	McCulloch	15 miles northeast of Brady.
Utah	Sanpete	3 miles north of Manti.
Vermont	Washington	3 miles east of Roxbury.
Virginia	Appomattox	11 miles south of east of Amherst.
Washington	Chelan	10 miles south of west of Wenatchee.
West Virginia	Braxton	4 miles east of Sutton.
Wisconsin	Wood	9 miles southeast of Marshfield.
Wyoming	Fremont	58 miles north of east of Lander.

The geographic center of North America is in Pierce County, N. Dak., a few miles west of Devils Lake.

EXTREME AND MEAN ALTITUDES OF THE STATES AND PRINCIPAL POSSESSIONS

Some of the altitudes in the following list are approximate only. Exact figures can not be obtained until a complete survey has been made of each area.

Extreme and mean altitudes in the United States

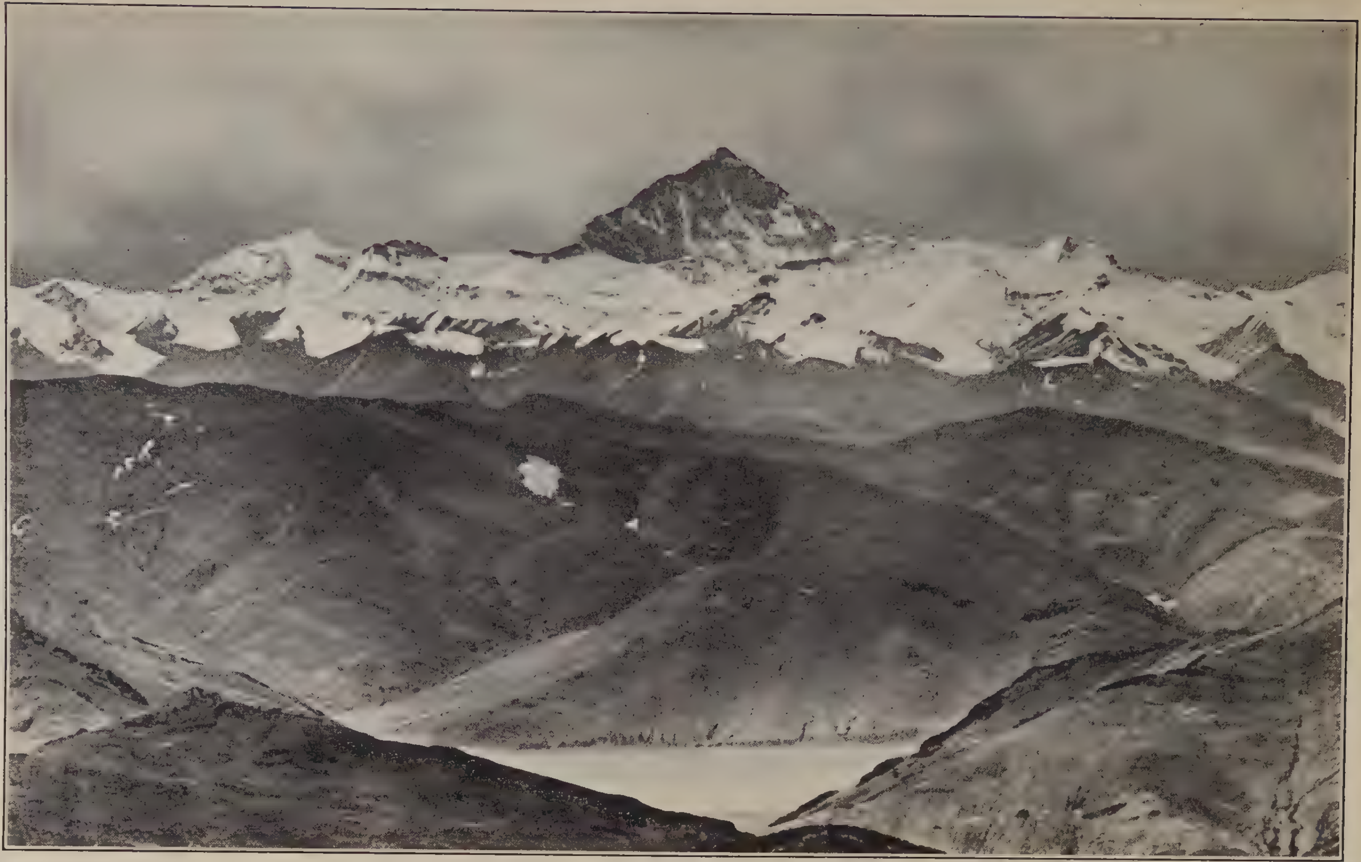
State	Highest point			Lowest point			Approximate mean altitude [a]
	Name	County	Altitude	Name	County	Altitude	
			Feet			*Feet*	*Feet*
Alabama	Cheaha Mountain	Clay-Talladega	2,407	Gulf of Mexico		Sea level.	500
Alaska	Mount McKinley		20,300	Pacific Ocean		Sea level.	
Arizona	San Francisco Peak	Coconino	12,611	Colorado River	Yuma	100	4,100
Arkansas	Blue Mountain	Polk-Scott	2,800	Ouachita River	Ashley-Union	55	650
	Magazine Mountain	Logan	2,800				
California	Mount Whitney	Inyo-Tulare	14,496	Death Valley	Inyo	[b] 276	2,900
Canal Zone	Cerro Galera	Southwestern part of zone	1,207	Caribbean Sea [c]			100
Colorado	Mount Elbert	Lake	14,420	Arkansas River	Prowers	3,350	6,800
Connecticut	Bear Mountain	Litchfield	2,355	Long Island Sound		Sea level.	500
Delaware	Centerville	New Castle	440	Atlantic Ocean		Sea level.	60
District of Columbia	Tenleytown	Northwest part	420	Potomac River		Sea level.	150
Florida	Iron Mountain	Polk	325	Atlantic Ocean		Sea level.	100
Georgia	Brasstown Bald	Towns-Union	4,768	do		Sea level.	600
Guam	Mount Lamlam		1,334	Pacific Ocean		Sea level.	
Hawaii	Mauna Kea	Island of Hawaii	13,784	do		Sea level.	
Idaho	Borah Peak	Custer	12,655	Snake River	Nez Perce	720	5,000
Illinois	Charles Mound	Jo Daviess	1,241	Mississippi River	Alexander	279	600
Indiana	Greensfork Township	Randolph	1,240	Ohio River	Vanderburg	316	700
Iowa	West of Sibley	Osceola	1,675	Mississippi River	Lee	477	1,100
Kansas	On west boundary	Wallace	4,135	Verdigris River	Montgomery	700	2,000
Kentucky	Big Black Mountain	Harlan	4,150	Mississippi River	Fulton	257	750
Louisiana	Northwest part of county	Claiborne	400	Gulf of Mexico		Sea level.	100
Maine	Mount Katahdin	Piscataquis	5,268	Atlantic Ocean		Sea level.	600
Maryland	Backbone Mountain	Garrett	3,340	do		Sea level.	350
Massachusetts	Mount Greylock	Berkshire	3,505	do		Sea level.	500
Michigan	Porcupine Mountains	Ontonagon	2,023	Lake Erie		572	900
Minnesota	Mesabi Range	St. Louis	1,920	Lake Superior		602	1,200
Mississippi	Near Iuka	Tishomingo	780	Gulf of Mexico		Sea level.	300
Missouri	Taum Sauk Mountain	Iron	1,800	St. Francis River	Dunklin	230	800
Montana	Granite Peak	Park	12,850	Kootenai River	Flathead	1,800	3,400
Nebraska	Southwest part of county	Banner	5,300	Southeast corner of State	Richardson	825	2,600
Nevada	Boundary Peak, White Mountains.	Esmeralda	13,145	Colorado River	Clark	470	5,500
New Hampshire	Mount Washington	Coos	6,288	Atlantic Ocean		Sea level.	1,000
New Jersey	High Point	Sussex	1,805	do		Sea level.	250
New Mexico	North Truchas Peak	Rio Arriba	13,306	Red Bluff	Eddy	2,876	5,700
New York	Mount Marcy	Essex	5,344	Atlantic Ocean		Sea level.	1,000

[a] See U. S. Geol. Survey Thirteenth Ann. Rept., pt. 2, pp. 284–289, 1893, for method of finding mean altitudes.
[b] Below sea level.
[c] Mean sea level of the Pacific at Panama appears to be 7 inches higher than mean sea level at Colon.

Extreme and mean altitudes in the United States—Continued

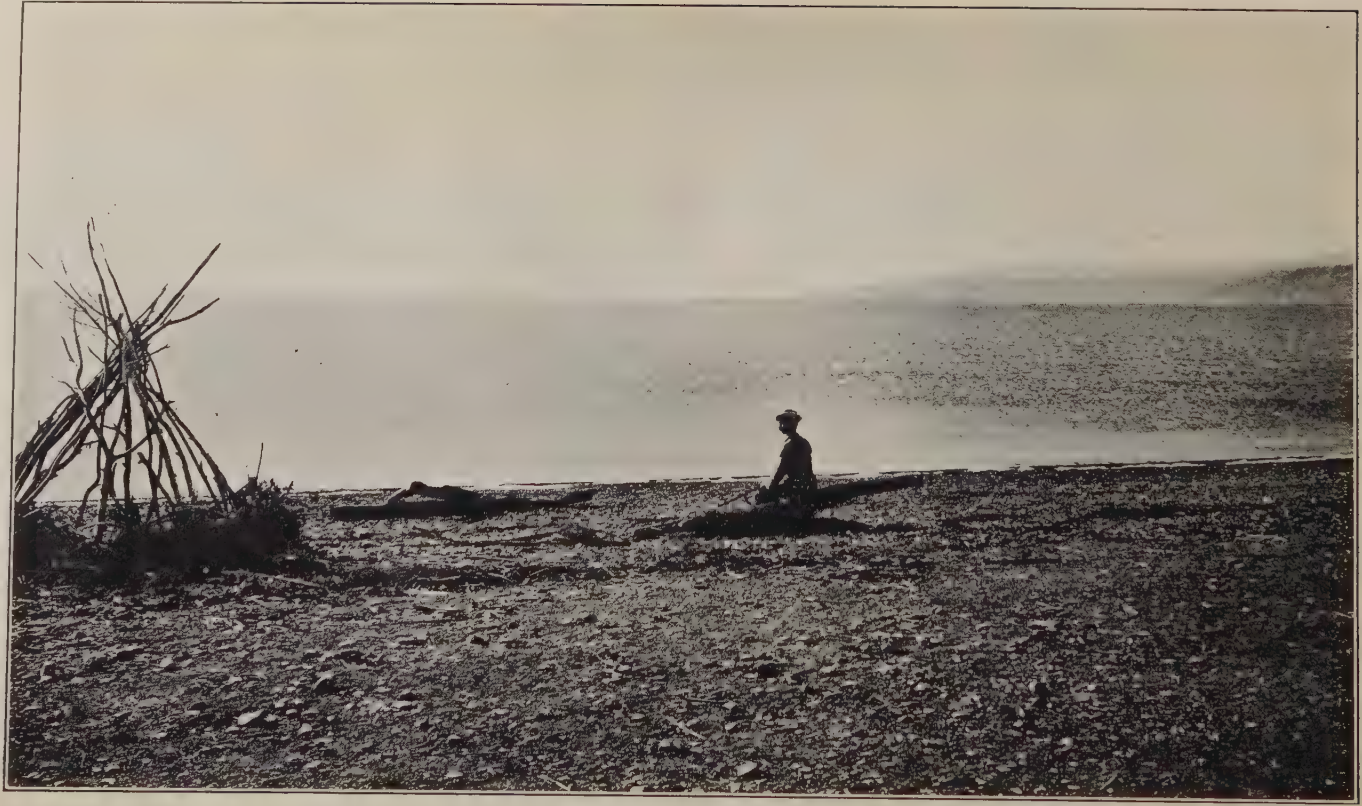
State	Highest point			Lowest point			Approximate mean altitude
	Name	County	Altitude	Name	County	Altitude	
			Feet			*Feet*	*Feet*
North Carolina	Mount Mitchell	Yancey	6,684	Atlantic Ocean		Sea level.	700
North Dakota	Black Butte	Slope	3,468	Pembina	Pembina	790	1,900
Ohio	Campbell Hill	Logan	1,550	Ohio River	Hamilton	425	850
Oklahoma	Black Mesa	Cimarron	4,978	Red River	McCurtain	300	1,300
Oregon	Mount Hood	Clackamas-Hood River	11,253	Pacific Ocean		Sea level.	3,300
Pennsylvania	Negro Mountain	Somerset	3,213	Delaware River		Sea level.	1,100
Philippine Islands	Mount Apo	Mindanao Island	9,610	Pacific Ocean		Sea level.	
Porto Rico	Luquillo Mountains	Humacao	3,532	Atlantic Ocean		Sea level.	
Rhode Island	Durfee Hill	Providence	805	do		Sea level.	200
Samoa	Lata	Tau Island	3,056				
South Carolina	Sassafras Mountain	Pickens	3,548	Atlantic Ocean		Sea level.	350
South Dakota	Harney Peak	Pennington	7,242	Big Stone Lake	Roberts	962	2,200
Tennessee	Clingmans Dome	Sevier	6,642	Mississippi River	Shelby	182	900
Texas	El Capitan	Culberson	8,700	Gulf of Mexico		Sea level.	1,700
Utah	Kings Peak	Duchesne	13,498	Beaverdam Creek	Washington	2,000	6,100
Vermont	Mount Mansfield	Lamoille	4,393	Lake Champlain	Franklin	95	1,000
Virginia	Mount Rogers	Grayson-Smyth	5,719	Atlantic Ocean		Sea level.	950
Virgin Islands	Crown Hill	Island of St. Thomas	1,550	do		Sea level.	
Washington	Mount Rainier	Pierce	14,408	Pacific Ocean		Sea level.	1,700
West Virginia	Spruce Knob	Pendleton	4,860	Potomac River	Jefferson	240	1,500
Wisconsin	Rib Hill	Marathon	1,940	Lake Michigan		581	1,050
Wyoming	Gannett Peak	Fremont	13,785	Belle Fourche River	Crook	3,100	6,700
United States (exclusive of Alaska).	Mount Whitney	Inyo-Tulare, Calif.	14,496	Death Valley	Inyo, Calif.	[b] 276	2,500

[b] Below sea level.



MOUNT EVEREST, HIMALAYA MOUNTAINS

The highest point on earth; altitude, 29,141 feet. View from a pass 40 miles distant. (Photograph copyrighted by the New York Times Co.)



DEAD SEA, PALESTINE

The shore is the lowest point of dry land on earth, 1,290 feet below sea level.

In order to compare the altitudes in the United States with those in other continents the following list is given, but many of the figures are only approximate:

Extremes of altitude in principal continents

	Approximate mean altitude	Highest point		Lowest point	
		Name	Above sea level	Name	Below sea level
	Feet		*Feet*		*Feet*
North America	2,000	Mount McKinley, Alaska	20,300	Death Valley, Calif.	276
South America	1,800	Mount Aconcagua, Chile-Argentina.	22,834	Sea level	
Europe	980	Mount Elbruz, Caucasus Mountains.	18,465	Caspian Sea, Russia	86
Asia	3,000	Mount Everest, Himalaya Mountains (pl. 11).	[a] 29,141	Dead Sea, Palestine (pl. 12).	1,290
Africa	1,900	Kibo Peak, British East Africa.	19,710	Libyan Desert [b]	440
Australia	1,000	Mount Kosciusko	7,328	Lake Eyre, South Australia.	38
Antarctica	6,000	Mount Markham	15,000	Sea level	

[a] This altitude is based on a recent computation of the old observations and of six new ones. For a discussion of this altitude see Howard-Bury, C. K., Mount Everest reconnaissance, 1921, pp. 10–12, New York and London, Longmans, Green & Co., 1922.

[b] Approximate latitude 29° 22′ N., longitude 26° 41′ E.

The greatest ocean depth thus far discovered is about 100 miles east of the north end of the island of Mindanao, in the Philippine Islands, where a depth of 35,400 feet was found by echo soundings.

THE UNITED STATES AND ITS POSSESSIONS

The limiting latitudes and longitudes of the mainland of the United States, exclusive of Alaska, are as follows:

Cape Sable, Fla., is in latitude 25° 07′, longitude 81° 05′. The extreme south point of Texas is in latitude 25° 50′, longitude 97° 24′. The Lake of the Woods projection extends to latitude 49° 23′ 04.5″, at longitude 95° 09′ 11.6″. The easternmost land is West Quoddy Head, near Eastport, Me., in longitude 66° 57′, latitude 44° 49′. Cape Alava, Wash., extends into the Pacific Ocean to longitude 124° 44′, latitude 48° 10′.

From the south point of Texas due north to the 49th parallel the distance is 1,598 miles. From West Quoddy Head west along the parallel to the Pacific Ocean the distance is 2,807 miles. These distances are computed to mean sea level.

The length of the Mexican boundary from the Gulf of Mexico to the Pacific Ocean is approximately 2,013 miles. The length of the northern boundary, excluding Alaska but including the water boundary through the Great Lakes, is 3,987 miles.

The lengths of the tidal coast lines of the mainland of continental United States (measured in steps of 1 mile) are: Atlantic Ocean, 5,565 miles; Gulf of Mexico, 3,641 miles; Pacific Ocean, 2,730 miles; total, 11,936 miles, which, added to the Canadian and Mexican boundary lines, gives a grand total of 17,936 miles for the entire boundary.

The shore line of the international waters, the St. Lawrence to Lake Superior, is approximately 3,041 miles.

The total area within these limits (exclusive of the water area of the Great Lakes) is 3,026,789 square miles. The average area of the 48 States is 63,057 miles, or nearly the same as the combined areas of New York, Masachusetts, Rhode Island, and Connecticut.

The highest point of land within the States is Mount Whitney—14,496 feet above sea level. The lowest point of dry land is in Death Valley—276 feet below sea level. These two points, both in California, are but 86 miles apart. (See pl. 7.)

The mean altitude of the 48 States is approximately 2,500 feet above sea level.

The geographic center of continental United States is in the eastern part of Smith County, Kans.

The two points farthest apart in the United States are Cape Flattery, Wash., and a point on the Florida coast south of Miami, 2,835 miles apart.

The United States covers an area of about four and one-quarter times the combined area of all its outlying possessions, Alaska, Hawaii, etc. (See fig. 6.)

It is estimated that the total length of coast line of the United States and of all its island possessions is nearly 50,000 miles.

The United States land farthest south is Rose Islet of the Samoan group—almost exactly 1,000 miles south of the Equator.[10] Point Barrow (latitude 71° 24′), the extreme north point of Alaska, is nearly 5,000 miles north of the Equator. (See pl. 8.)

Alaska with its islands extends from 130° west past the 180° line to 172½° east, or 57½° of longitude. The difference in time (3 hours 50 minutes) between these two extremes is greater than that between New York and San Francisco.

The highest point in North America is Mount McKinley, in Alaska, 20,300 feet above sea level. (See pl. 1.)

The geographic center of North America is in North Dakota, a few miles west of Devils Lake.

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[10] Claims that may be based upon the Byrd explorations and discoveries of 1929–30 in the Antarctic region may alter this statement.

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